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QUEEN'S UNIVERSITY
AT KINGSTON

KINGSTON ONTARIO CANADA

QUEEN'S UNIVERSITY

KINGSTON, CANADA



INCORPORATED BY ROYAL CHARTER IN 1841

CALENDAR

of

THE FACULTY OF ARTS

ONE HUNDRED AND NINTH SESSION

SESSION 1949 - 50

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KINGSTON. ONTARIO

This Calendar is published some months before the opening of the session. Staff, courses and regulations will probably be as announced, but the University reserves the right to make changes.

QUEEN'S UNIVERSITY

KINGSTON, ONTARIO



INCORPORATED BY ROYAL CHARTER IN 1841

CALENDAR of THE FACULTY OF ARTS



ONE HUNDRED AND NINTH SESSION

SESSION 1949 - 50

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STUDENTS



1949-1950

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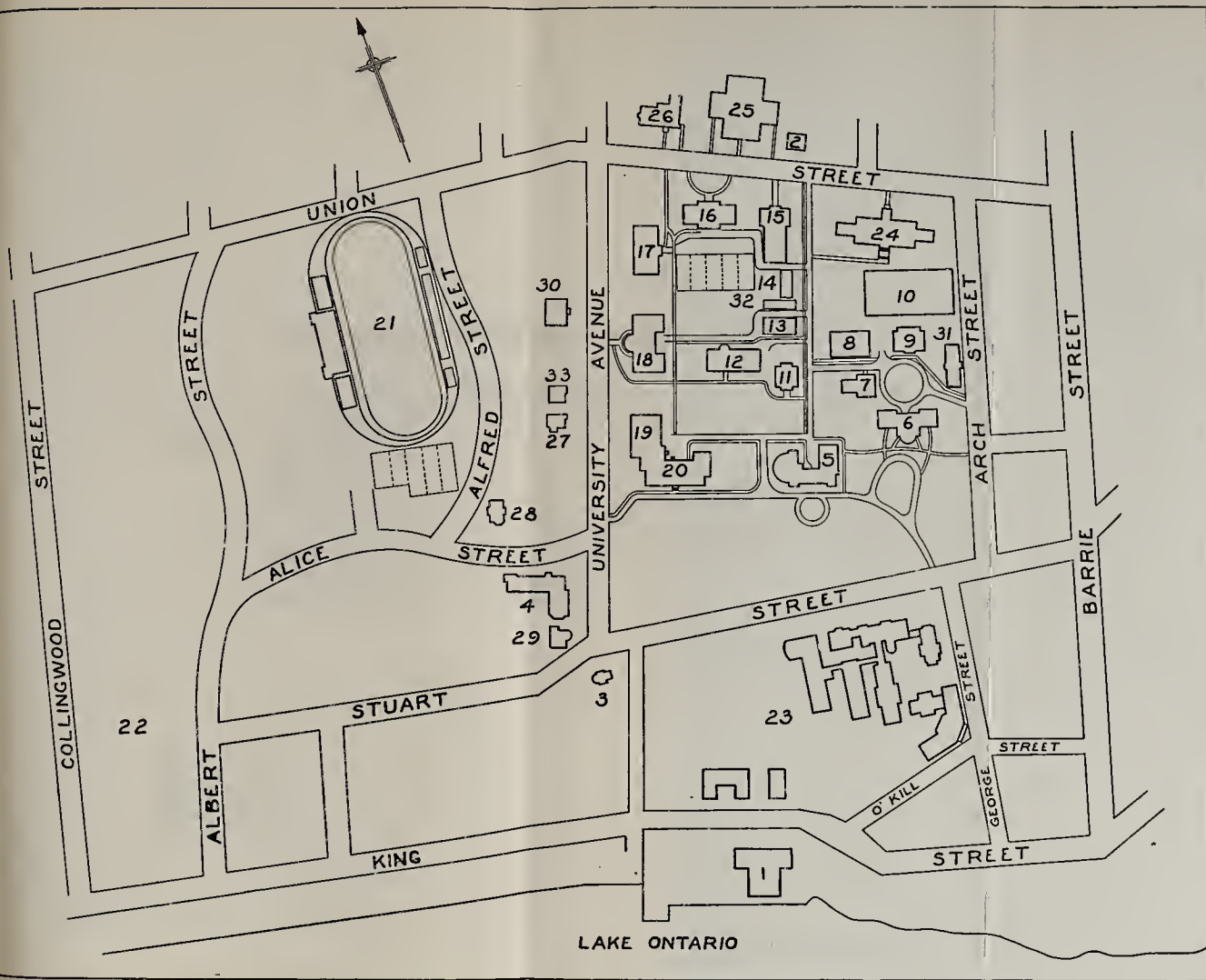
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PLAN OF QUEEN'S UNIVERSITY GROUNDS

- | | | |
|--------------------------|--|------------------------------|
| 1. Central Heating Plant | 13. Technical Supplies and Storehouse | 24. Miller Hall |
| 2. Commerce Building | 14. Mechanical Laboratory | 25. Gymnasium |
| 3. Observatory | 15. Nicol Hall | 26. Students' Memorial Union |
| 4. Ban Righ Hall | 16. Gordon Hall | 27. Gordon House |
| 5. Old Arts Building | 17. Douglas Library | 28. Goodwin House |
| 6. Principal's Residence | 18. Ontario Hall | 29. Macdonnell House |
| 7. Old Medical Building | 19. Grant Hall | 30. Muir House |
| 8. Hydraulics Laboratory | 20. Kingston Hall | 31. Craine Building |
| 9. Medical Laboratory | 21. Richardson Stadium | 32. Gun Shed |
| 10. Jock Harty Arena | 22. Leonard Field | 33. Matheson House |
| 11. Carruthers Hall | 23. Kingston General Hospital
and Richardson Laboratory | |
| 12. Fleming Hall | | |

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THE ACADEMIC YEAR*

THE HUNDRED AND NINTH SESSION of the University will begin on Wednesday, September 21, 1949, at 8 a.m. Convocation will be held on Saturday, May 20, 1950 (this date is provisional).

1949

May 1—Written notice due at the Registrar's Office of candidates' intention to compete for Provincial Scholarships and Ontario Matriculation Scholarships.

June 15—Last day for receiving applications for fall Supplementals without extra fee.

June 25—Last day for receiving applications for fall Supplementals with extra fee.

July 4—Registration for Summer School. Registrations will not be accepted after July 4 except when special arrangements have been made *before that date*, and on these late registrations an additional fee of \$3 will be charged.

July 5—Summer School opens at 8 a.m.

July 10—Last day for receiving applications, from Summer School and extramural students, for September examinations, and degrees, without extra fee.

July 20—Last day for receiving applications, from Summer School and extramural students, for September examinations, and degrees, with extra fee.

August 17—Summer School closes.

August 30—Arts supplemental examinations begin.

September 1—Last day for receiving applications for the Robert Bruce Bursaries and grants from the O. M. Montgomery Memorial Fund.

September 17—Last day for registration of extramural students without extra fee.

September 19—Registration in Arts begins on September 19 for students who are registering for the first time. Such students must submit certificates of vaccination. A late fee will be charged after this date (\$3 on September 20 and \$1 a day thereafter).

*The term "Academic Year" used in connection with regulations and Courses of study refers to the period extending from October 1 to September 30.

September 20 and 21—Registration of intramural students who have been registered in previous sessions. A late fee will be charged after this date (\$3 on September 22 and \$1 a day thereafter).

September 22—Classes in Arts open at 8 a.m.

September 24—Last day for registration of extramural students with extra fee of \$3.

October 1—Last day for registration of intramural students who have not previously obtained permission to register later.

October 15—Fall Convocation at 11 a.m.

October 16—University Day.

December 1—Last day for receiving applications and fees from extramural students for January examinations.

Beginning of mid-year examinations to be announced.

December 21—Christmas holidays begin at noon.

1950

January 3—Examinations in half-courses of the first term begin at 2 p.m.

January 5—Classes in courses of the second term begin at 8 a.m.
Last day for payment of the second instalment of fees without penalty.

January 15—Last day for receiving applications from candidates for the M. C. Cameron Scholarship in Gaelic.

February 10—Last day for receiving applications and fees from extramural students for the April examinations and for degrees.

March 15—Last day for receiving applications and fees for degrees from intramural students.

April 1—Last day for receiving manuscripts for university prizes, applications for Arts Research Fellowships, Leonard Fellowships, and Khaki University and other Scholarships.

April 6—Classwork closes at noon.

April 7—Good Friday.

April 10—Last day for extramural students to register for the summer session without extra fee.

April 11—Examinations begin.

April 17—Last day for extramural students to add classes for the summer session with extra fee.

May 20—Convocation for conferring degrees, announcing honours, and distributing prizes and medals. (This date is provisional.)

1949

JANUARY							FEBRUARY							MARCH							APRIL								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16		
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23		
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11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17		
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24		
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1950

JANUARY							FEBRUARY							MARCH							APRIL						
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22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22
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MAY							JUNE							JULY							AUGUST						
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14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31		..
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SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER							
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24	25	26	27	28	29	30	29	30	31					26	27	28	29	30			24	25	26	27	28	29	30	
.....																					31							

TIME-TABLE OF LABORATORY WORK

The numbers in parentheses indicate the hours.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
Bacteriology	13 (1-3)	13 (1-3)	13 (10-12.30)	10 (1.30-4.30)	13 (10-12.30)	
Biochemistry	16 (1.30-4.30)			18 (2-5.30)	18 (1.30-5)	18 (10-12)
Biology	1 (Sec. A, 1.30-3.30) 16 (1.30-4.30) 27 (1.30-5.30)	10 (1.30-4.30) 18 (1.30-4.30) 20 (9-12) 27 (1.30-5.30)	1 (Sec. B, 1.30-3.30) 16 (1.30-4.30) 17 (1.30-4.30) 20 (9-12)	12 (1.30-4.30) 26 (1.30-4.30) 31 (1.30-4.30)	19 (1.30-4.30) 26 (1.30-4.30)	
Chemistry	1 (1.30-3.30) 12 (1.30-4.30) 17 (1.30-4.30) 22 (1.30-4.30)	3 (1.30-5.30) 12 (1.30-4.30) 14 (1.30-4.30) 15a (1.30-4.30) 22 (1.30-4.30) 24 (1.30-4.30)	24 (1.30-4.30) 25 (1.30-4.30)	2 (1.30-3.30) 13 (1.30-4.30)	10 (1.30-4.30) 12 (1.30-4.30) 22 (1.30-4.30) 24 (1.30-4.30)	12 (9-12) 22 (9-12)
Geology	13 (2.30-4.30) 17a (1.30-4.30) 20b (1.30-5.30) 113 (1.30-4.30)	1 (Sec. A.) (1.30-3.30) 14 (1.30-3.30) or (3.30-5.30) 114 (1.30-4.30)	1 (Sec. B.), 1.30-3.30	10b (1.30-3.30) or (3.30-5.30) 114 (1.30-4.30)	11 (8-10)	
Mineralogy			10a (1.30-3.30) 11 (1.30-3.30) or (3.30-5.30) 14a (10-12)	14a (1.30-3.30) or (3.30-5.30)	12 (1.30-3.30)	10a (10-12) 10b (9-11)
Physics		1 (1.30-3.30) 10b (3.30-5.30) 12a (3.30-5.30) 17b (2.30-4.30)	1 (1.30-3.30) 11 (1.30-4.30) or (2.30-5.30)	2 (2-4) 13b (1.30-3.30) or (3.30-5.30) 14a (1.30-3.30) or (3.30-5.30)	2 (1.30-3.30)	

HISTORY OF THE UNIVERSITY

Queen's University owes its origin to the desire of the Synod of the Presbyterian Church in Canada, in connection with the Church of Scotland, for a ministry trained within the country. As early as 1832 the Provincial Government had been petitioned "to endow without delay an institution, or professorships, for the education and training of young men for the ministry in connection with the Synod." This and other representations failing of their object, steps were taken by the Synod to found a college at Kingston on the lines of the Scottish National Universities. On October 16, 1841, a Royal Charter was issued by Her Majesty Queen Victoria for the establishment of Queen's College, Kingston, and the first classes were opened in March, 1842, with the Rev. Dr. Liddell as Principal. Funds were provided in part by grants from the Presbyterian Church in Scotland and from the Canadian Government, and in part by liberal subscriptions from the friends of the young and growing University. In 1867-68, however, the withdrawal of the Provincial grant, and the failure of the Commercial Bank, almost brought financial disaster. But the crisis was met by the determination of Principal Snodgrass and other self-denying workers, chief among whom was Professor Mackerras. The country was canvassed for subscriptions, and as a result of the widespread interest aroused, \$113,000 was added to the endowment.

In 1877 Principal Snodgrass was succeeded by the Rev. G. M. Grant, who for a quarter of a century built with brilliant success upon the foundation laid by his predecessors. Under him the University gained rapidly in size and prestige. By 1881 Queen's had a new building, an enlarged staff, and a great increase of students. In 1887, as the result of an effort in commemoration of the Queen's Jubilee, \$250,000 was raised, resulting in further extension, and in the establishment of new professorships.

Principal Grant died in 1902, and was succeeded in the following year by the Very Rev. D. M. Gordon. In 1916, owing to ill-health, Principal Gordon resigned his position, but continued in office until the autumn of 1917, when the Rev. R. Bruce Taylor was appointed as his successor. In 1930 Principal Taylor resigned his position to live abroad and Dr. J. C. Connell was appointed Acting Principal. He held this position for four months, until October, when W. Hamilton Fyfe, Headmaster of Christ's Hospital, England, and formerly Fellow of Merton College, Oxford, was installed as Principal of the University. Principal Fyfe resigned in 1936 to accept the Principalship of the University of Aberdeen. Dr. Fyfe was succeeded by Principal R. C. Wallace, President of the University of Alberta from 1928 to 1936.

In 1854 the Medical Faculty of Queen's was established. It was reorganized in 1866 as the Royal College of Physicians and Surgeons in affiliation with the University, but in 1891 the original status was resumed. Excellent facilities for clinical work are provided in the Kingston General Hospital, Hotel Dieu, and the Ontario Hospital.

Queen's led the way in co-education. As early as 1870 special classes in English and other subjects were formed for women, but Courses leading to a degree were not thrown open to them until 1878-79. In 1880 co-education was extended to the medical course, and in 1883 a separate Women's Medical College was opened and affiliated with Queen's. It was closed in 1894, as similar facilities were offered in Toronto and elsewhere. In 1943, for the first time in 49 years, women were again admitted to the Faculty of Medicine.

The School of Mining was founded in 1893 under an Ontario charter. For several sessions all its departments were housed in Carruthers Hall, which had been erected in 1891, but in view of the rapid growth of the School the Provincial Legislature in 1900 provided for its accommodation two large buildings, Ontario Hall for the Departments of Physics, Geology and Mineralogy, and Fleming Hall for the Departments of Civil, Mechanical, and Electrical Engineering. In 1911 the Provincial Government erected Gordon Hall, which is entirely used for the teaching of Chemistry, and through the generosity of Professor Nicol and other graduates, Nicol Hall was built to provide class rooms and laboratories for the Department of Mining and Metallurgy. The School of Mining, which since 1893 had been under the control of a separate Board, was in 1916 amalgamated with the University, and now constitutes its Faculty of Applied Science. In 1943 the Faculty of Applied Science admitted women to the course for the first time.

In 1907 the Ontario Government established at Queen's a second Faculty of Education for the purpose of providing professional training for teachers in the secondary schools of the Province. In 1920, however, the work of the Faculty was discontinued because of the decision of the Government to extend the scope of the Normal Schools and to create in Toronto the Ontario College for Teachers.

There is now on the University Campus a stately group of buildings, comprising the Old Arts Building (the Theological Building); Carruthers Hall (Civil Engineering); Kingston Hall (Arts), the gift of the city of Kingston; Grant Hall, erected by students, graduates and friends in honour of Principal Grant; Ontario Hall (Physics); Fleming Hall (Electrical Engineering); Gordon Hall (Chemistry and Chemical Engineering); Nicol Hall (Mining and Metallurgy); the Medical Building (Anatomy, and Preventive Medicine); the Medical Laboratories Building; the Gymnasium; Miller Hall (Geology

and Mineralogy), named in memory of the late Dr. W. G. Miller; the Douglas Library, named in memory of Dr. James Douglas, a former chancellor of the University, who contributed \$150,000 to its cost; Ban Righ Hall, the residence for women erected through the efforts of the Alumnae Association; the Richardson Pathological Laboratory; McLaughlin Hall (Mechanical Engineering) and the Students' Memorial Union. The Province of Ontario, besides its generous gifts of Ontario, Fleming, and Gordon Halls, contributed \$150,000 to the Douglas Library and \$125,000 to the Central Heating and Power Plant. The City of Kingston, besides providing Kingston Hall, made a gift of \$150,000 for its reconstruction and fire-proofing in 1932. The Craine Building, named in honour of Dr. Agnes Douglas Craine who left a capital sum of \$375,000 for the teaching of Biochemistry, was opened in 1937. McLaughlin Hall, named in honour of the donor, R. S. McLaughlin, Esq., LL.D., of Oshawa, Ontario, opened in September, 1948, and accommodates the work in Mechanical Engineering. McLaughlin Hall was in partial use during Session 1947-48. The destruction of the Students' Union by fire in September, 1947, made it necessary to find temporary dining and lounge accommodation for men students. The south wing of McLaughlin Hall was fitted up for this purpose and was used throughout the session. The reconstruction of the Union was begun immediately after the fire and by September, 1948, the Great Hall, the canteen, and some lounge rooms were ready for use. The formal opening will take place in October 1949.

Queen's University, though founded by a church, was dedicated to the nation. As its constituency expanded, its constitution was gradually broadened, until finally in 1912, as a result of an amicable arrangement between the Presbyterian Church and the Trustees of the University, an act was passed by the Dominion Parliament removing the last vestige of denominational control.

The endowment of the University is at present almost \$5,500,000, and the annual income, derived from all sources, is over \$1,000,000. The registration has grown from 665 in 1900 to over 5,000 in the present session, and Queen's has become nation-wide in its work and influence.

GOVERNMENT AND ADMINISTRATION

The administration of the University is vested in the Board of Trustees, the University Council, the Senate, and the Faculty Boards.

THE BOARD OF TRUSTEES

The Board of Trustees consists of *ex-officio* and elective members. The former are the Chancellor, the Principal, and the Rector. The latter consist of (1) one representative from each affiliated college, (2) representatives as provided for by the Statutes from (a) the University Council, (b) the Benefactors, (c) the Graduates, and (3) members elected by the Board of Trustees.

The functions of the Board of Trustees are to manage the finances, to possess and care for the property, to procure legislation, to appoint instructors and other officers, and in general attend to such external matters as do not relate directly to instruction.

THE UNIVERSITY COUNCIL

The University Council consists of the Chancellor, the Trustees, the members of the Senate, and an equal number of members elected by the graduates from their own members.

The annual meeting of the Council is held on the day immediately preceding the spring Convocation.

The Functions of the Council are:

(1) To elect the Chancellor, except when two or more candidates are nominated, in which case the election is by registered graduates.

(2) To elect six trustees, two of whom shall retire annually.

(3) To make by-laws governing the elections of (a) the Rector by the registered students, (b) seven trustees by the benefactors, (c) six trustees by the University Council, (d) six trustees by the graduates.

(4) To discuss all questions relating to the University and its welfare.

(5) To make representation of its views to the Senate or the Board of Trustees.

(6) To decide on proposals for affiliation.

(7) To arrange all matters pertaining to (a) its own meetings and business, (b) the meetings and proceedings of Convocation, (c) the installation of the Chancellor, (d) the fees for membership, registration and voting.

THE SENATE

The Senate consists of:

The Principal.

The Vice-Principal.

The Principal of Queen's Theological College.

The Dean of the Faculty of Arts.

The Dean of the Faculty of Applied Science.

The Dean of the Faculty of Medicine.

Three Professors elected by the Faculty of Arts.

Three Professors elected by the Faculty of Applied Science.

Three Professors elected by the Faculty of Medicine.

Two Professors elected by the Faculty of Queen's Theological College.

The Functions of the Senate are:

(1) To determine all matters of an academic character which concern the University as a whole.

(2) To consider and determine all courses of study leading to a degree, including conditions of Matriculation, on recommendation of the respective Faculty Boards; but the Senate shall not embody any changes without having previously presented them to the Faculty.

(3) To recommend to the Board of Trustees the establishment of any additional faculty, department, chair, or course of instruction in the University.

(4) To be the medium of communication between the Alma Mater Society and the Governing Boards.

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(9) To award University Scholarships, Medals, and Prizes.

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(2) To decide upon applications for admission or for change of course, subject to the regulations of the Senate.

(3) To submit to the Senate names for both ordinary and honorary degrees.

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(7) To exercise academic supervision over students.

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 160 Collingwood Street.
- A. R. M. LOWER, M.A.(Toronto), Ph.D.(Harvard), F.R.S.C.,
Professor of History,
 Collins Bay
- V. W. MALACH, B.A., B.Com.(Queen's), Ph.D.(London),
*Associate Professor, Royal Military College, Special Lec-
 turer in Economics,*
 132 Earl Street.
- JAN MEISEL, M.A. (Toronto),
Instructor in Political Science (Session 1949-50),
 Queen's University.
- G. S. MELVIN, M.D.(Aberdeen),
Professor of Physiology,
 127 King Street West.
- NORMAN MILLER, M.A. (Queen's), Ph.D. (Harvard),
*Professor of Mathematics and Chairman of Extramural
 and Tutorial Work in Mathematics,*
 28 Kensington Avenue.
- L. A. MUNRO, M.A. (Dal.), Ph.D. (McGill), F.R.S.C., F.C.I.C.
Professor of Chemistry,
 93 Beverly Street.
- JEANNE M. McCONNELL, B.S., C.A.P.,
Instructor in French,
 31 Ellerbeck Street.
- C. H. McCUAIG, M.D., C.M. (Queen's),
Professor of Psychiatry,
 96 Queen's Crescent.
- R. D. MACDONALD, M.Sc. (Alberta), M.A. (Queen's), Ph.D. (Princeton),
Assistant Professor of Geology,
 227 Helen Street.
- MARY L. MACDONNELL, M.A. (Queen's),
Assistant Professor of Classics,
 104 Queen's Crescent.
- J. L. McDOUGALL, M.A. (Toronto),
Professor of Commerce,
 (On leave of absence, Session 1949-50.)
 253 Albert Street.

W. A. MACKINTOSH, C.M.G., M.A. (Queen's), Ph.D. (Harvard),
LL.D. (Manitoba), F.R.S.C.,

*Vice-Principal, Dean of the Faculty of Arts; the Sir
John A. Macdonald Professor of Political and Economic
Science and Director of the School of Commerce and
Administration,*

Queen's University Grounds.

R. A. MACLEOD, B.A. (British Columbia), Ph.D. (Wisconsin),
Assistant Professor of Biochemistry,

Queen's University.

L. G. MACPHERSON, B.A. (Brandon), C.A.,
Associate Professor of Commerce,

82 Beverly Street.

J. A. McRAE, M.A. (Queen's), Ph.D. (Manchester), F.R.I.C., F.R.S.C.,
Professor of Chemistry and Head of the Department,

226 Frontenac Street.

JEAN OGIER, L-ès-L. (Université de Poitiers),
Lecturer in French (Session 1949-50),

Queen's University.

J. H. ORR, M.D., C.M. (Queen's), F.R.C.P. (C),
*Professor of Bacteriology and Secretary of the Faculty
of Medicine,*

529 Johnson Street.

DAVID POLLACK, M.Sc. (Alberta),
Instructor in Biology (Session 1948-49),

25 Colborne Street.

W. H. POOLE, M.A. (Alberta),
Professor of Commerce,

306 Frontenac Street.

G. B. REED, O.B.E., B.Sc., M.A., Ph.D. (Harvard), F.R.S.C.,
Professor of Bacteriology and Head of the Department,

218 Albert Street.

J. K. ROBERTSON, M.A. (Toronto), F.R.S.C.,
*Professor of Experimental Physics and Head of
the Department,*

105 Lower Albert Street.

- B. ROSE, B.Sc. (Queen's), Ph.D. (Yale), F.R.S.C., F.G.S.A.,
Professor of Geology,
 208 Albert St.
- MARION ROSS, B.A. (Queen's),
Assistant Professor of Physical and Health Education,
 123 Union Street West.
- J. A. ROY, M.A. (Edinburgh),
Professor of English,
 102 Stuart Street.
- MARGARET E. M. SAWYER, M.A., Ph.D. (McGill),
Assistant Professor of Biology,
 Royal Military College Grounds.
- CATHERINE SCHAFFTER, B.A. (Western),
Instructor in Spanish,
 Queen's University.
- GLEN SHORTLIFFE, M.A. (Alberta), Ph.D. (Cornell),
Associate Professor of French,
 (On leave of absence, Session 1949-50.)
- E. I. SIGNORI, M.A., Ph.D. (Toronto),
Assistant Professor of Psychology,
 132 Wellington Street.
- R. G. SINCLAIR, B.A. (Queen's), Ph.D. (Rochester), F.R.S.C.,
*The Craine Professor of Biochemistry and Head
 of the Department,*
 Collins Bay.
- R. G. H. SMAILES, B.Sc. (Econ.) (London), A.C.A. (Eng.) F.C.A. (Ont.),
Professor of Commerce,
 52 Kensington Avenue.
- S. E. SMETHURST, M.A. (Cantab.),
Professor of Classics,
 23 West Street.
- W. E. L. SMITH, M.C., M.A. (Toronto), Ph.D. (Edinburgh),
Assistant Professor of History,
 R.R. No. 2, Kingston, Ont.
- W. M. SMITH, B.Sc. (New Brunswick), Ph.D. (McGill), Ph.D. (Cantab.),
Associate Professor of Chemistry,
 40 Napier Street.

- J. E. SMYTH, M.Com.(Toronto), C.A.,
Assistant Professor of Commerce,
 575B Princess Street.
- R. A. STAAL, M.A., Ph.D. (Toronto),
Lecturer in Mathematics (Session 1948-49),
 523 Johnson Street.
- F. TINDALL, A.B.(Syracuse),
Assistant Professor of Physical and Health Education,
 45 West Street.
- M. TIROL, O.I.P., L. és L. (Paris), Ph.D. (London),
Professor of French,
 130 Lower Albert Street.
- H. L. TRACY, B.A. (Toronto), Ph.D. (Chicago),
*Professor of Classics, Head of the Department of Classics
 and Director of the Summer School,*
 260 Johnson Street.
- R. G. TROTTER, B.A. (Yale), M.A., Ph D. (Harvard), D.C.L. (Acadia),
 F.R.Hist.S., F.R.S.C.,
*The James Douglas Professor of Canadian and Colonial
 History and Head of the Department of History,*
 (On leave of absence, Session 1949-50.)
 320 King Street West.
- M. C. URQUHART, B.A.(Alberta),
Associate Professor of Economics,
 134 King Street East.
- C. J. VINCENT, B.A. (University of Western Ontario), A.M., Ph.D.
 (Harvard),
Professor of English,
 105 Hill Street.
- E. A. WALKER, M.A. (Cantab.),
Assistant Professor of English,
 251 Willingdon Avenue.
- E. E. WATSON, M.Sc. (McGill), Ph.D. (Cantab.),
Professor of Physics,
 82 Traymoor Avenue.
- A. S. WEST, B.Sc. (Mass. State), Ph.D. (Yale),
Professor of Biology,
 287 Frontenac Street.

TUTORS FOR SESSION 1948-49

ART: Grant Macdonald.

BIOLOGY: W. Constance G. Bennett, S. R. Brown, E. K. Craig, Norma M. England, W. F. Hampton, Shirley J. Hodgins, L. Jean Huntley, Doreen E. Maxwell, H. J. A. Payne, J. R. Vallentyne, Luella K. Weresub.

CHEMISTRY: H. I. Bolker, B.A. (Queen's), H. H. Brownell, B.A. (Queen's), J. R. Coleman, S. M. Creighton, B.A. (Queen's), K. Monica Lawless, B.A. (McMaster), J. E. Milks, B.A. (Queen's), J. Beryl Truscott.

CLASSICS: J. K. Buckley, W. G. Condie, Margaret L. May.

COMMERCE: P. G. Campfield, P. R. Griffin, J. R. Hall, R. R. Jackson, R. E. McAfee, L. M. Pollock, B. Com. (Queen's), H. C. Proctor, C. A. Rice, W. R. Ryan.

ECONOMICS: G. D. De Ré, S. Fyfe, E. M. V. Howarth, J. W. Latimer, B.A. (Queen's), D. S. R. Leighton, C. L. Pearsall, J. B. Roe, W. F. Stone, G. D. Sutton, B.Com. (Queen's), H. W. Walker, R. M. Walker, F. J. Wilson, M.A. (Queen's).

ENGLISH: W. S. Avis, Mrs. W. S. Avis, B.A. (Saskatchewan), Kathleen R. Barclay, C. M. Bolger, M. Jeanne Broley, Mrs. D. M. Chown, B.A. (Queen's), A. P. Crofoot, Priscilla A. Peebles, Joan M. Torgeson, F. J. Wilson, M.A. (Queen's).

FRENCH: Mrs. R. L. Fauconnier, L.-ès-L., Marion Robins.

GEOLOGY: D. G. Crosby, K. A. Phillips, B.A. (Oxon.).

GERMAN: F. Friesen.

HISTORY: K. C. Binks, B.A. (Queen's), C. I. Fairholm, S. R. Foden, B.A. (Queen's), Violet M. Nelson, B.A. (Queen's), Ethel G. Stewart, B.A. (Queen's), Patricia J. Whitehead, B.A. (London), F. J. Wilson, M.A. (Queen's).

MATHEMATICS: H. J. Henderson, K. E. Iverson, G. B. Lawson, C. W. Montgomery, E. J. Morgan, M. M. Rutherford.

MINERALOGY: J. C. Gill, B.A. (Queen's).

PHILOSOPHY: M. D. Bebee, Barbara I. M. Bews, J. E. O. Davies, N. V. Jaychuk, A. M. Moore.

PHYSICS: J. R. Allen, B.A. (Queen's), C. F. Blancher, Phyllis E. George, I. B. McDiarmid, A. Pearson.

POLITICS: W. E. Bauer, J. G. Kelly, J. M. Robins, Edith Shindman, F. J. Wilson, M.A. (Queen's).

PSYCHOLOGY: Marie Calp, Anne V. A. Des Brisay, J. A. Easterbrook, I. L. Gorman, Mrs. I. L. Gorman, Mary C. Malcolm, Jane E. McLaughlin, J. A. Patton, K. G. Phin, B.A. (Queen's), Joan C. Stewart, Elspeth H. Wallace.

SPANISH: Frances M. Craig, B.A. (Queen's), Eleanor A. Smith, B.A. (Queen's), Mrs. J. G. Smith, B.A. (Toronto).

III—INSTRUCTORS IN THE SCHOOL OF COMMERCE

W. A. MACKINTOSH, C.M.G., M.A., Ph.D., LL.D., F.R.S.C.

Dean of the Faculty of Arts

Professor of Economics; Director of the School of Commerce and Administration

R. G. H. SMAILS, B.Sc.(Econ.), A.C.A.(Eng.), F.C.A.(Ont.)

Professor of Commerce

C. A. CURTIS, B.A., Ph.D., F.R.S.C.

Professor of Economics

F. A. KNOX, B.A., F.R.S.C.

Professor of Economics

J. A. CORRY, LL.B., B.C.L., F.R.S.C.

The Hardy Professor of Political Science

J. C. CAMERON, M.Com.

Professor of Industrial Relations and Head of the Department of Industrial Relations

W. H. POOLE, M.A.

Professor of Commerce

J. L. McDOUGALL, M.A.

Associate Professor of Commerce

(On leave of absence, Session 1949-50)

L. G. MACPHERSON, B.A., C.A.

Associate Professor of Commerce

C. H. CURTIS, M.A.

Associate Professor of Industrial Relations

M. C. URQUHART, B.A.

Associate Professor of Economics

V. W. MALACH, B.A., B.Com., Ph.D.

Associate Professor, Royal Military College, Special Lecturer

J. E. HODGETTS, M.A., Ph.D.

Assistant Professor of Political Science

(On leave of absence, Session 1949-50)

W. G. LEONARD, C.A.

Assistant Professor of Commerce

J. E. SMYTH, M.Com., C.A.

Assistant Professor of Commerce

R. Y. GREY, B.A.

Lecturer in Political Science

J. MEISEL, M.A.

Instructor in Political Science

EQUIPMENT AND SPECIAL FEATURES

THE LIBRARY

The Douglas Library, named for Chancellor James Douglas, LL.D. (1837-1918), was opened in 1924. Opposite the main entrance, it enshrines the Memorial Cenotaph where a bronze plaque records the names of 178 Queen's students and graduates who sacrificed their lives 1914-1918.

The ground floor houses a well-equipped book-bindery. On the first floor are the Librarian's Office; the Treasure Room, containing Queen's archives, rare books, manuscripts and incunabula; the Order Offices; entrance to the Stacks; and the Music Room which contains a record library of about 2,000 discs, a combination radio and record-player, a grand piano, well-appointed furnishings, and a music reference library of about 1,100 volumes and 1,200 music scores. On the second floor are the Lorne Pierce Room, housing a collection of Canadiana rich in first editions, rare items, and original manuscripts; the Map Room which contains an extensive collection of historical maps, Canadian and British official war maps of World War II, and the McNicol Collection of works relating to telegraphy, telephony, and radio.

The Main Reading Room with arched ceiling, mullioned windows featuring printers' devices in stained glass, dark oak furnishings, and fluorescent lighting, runs the entire length of the third floor. On open shelves are current numbers of over 800 periodicals and about 5,000 general reference works; three vertical files contain pamphlet material on current topics. The Card Catalogue indexes all library holdings; the system of classification is that of the Library of Congress. The Circulation, Reference, and Reserved Books departments, the Art Room and the Microfilm Room are all on the third floor.

There are five tiers of stacks at the north and south ends of the Library and two in the central part of the building. The Government Document section contains about 40,000 items, the general collection over 210,000 volumes. Many paintings, etchings, and other works of art belonging to the Queen's Art Collection are housed in the Douglas Library, also the Shortt-Haydon collection of Canadian portraits and historical prints.

Pending construction of an Administration Building, university administrative offices are housed in the Douglas Library.

In addition to the main library there are departmental libraries for Chemistry, Biochemistry, Biology, Civil, Mechanical and Electrical En-

gineering, Mathematics, Geology and Mineralogy, Mining and Metallurgy, Medicine, and Theology.

Library hours: Monday-Friday, 8 a.m. to 10.30 p.m.; Saturday, 8 a.m. to 4 p.m.; Sunday, 2 p.m. to 5 p.m.

THE MUSEUMS

The Miller Memorial Museum, named in memory of the late Willet G. Miller, formerly Provincial Geologist of Ontario, has been erected for the Departments of Geology and Mineralogy. The main floor is entirely devoted to museum purposes and contains among other things an excellent collection of economic minerals used in industrial processes; a collection of at least a thousand mounted individual crystals; large collections illustrating the systematic classification of minerals and rocks; another illustrating the ores found particularly in Canadian mines, a stratigraphic assembly of rocks and a paleontological collection illustrating the geologic life record. The museum is now being reorganized by Emeritus Professor M. B. Baker.

An ethnological collection of weapons, utensils, dresses and ornaments is also housed in the east wing of the museum.

The Biological Museum, in the Old Arts Building, has a large Botanical collection illustrating the flora of North America, Europe, Asia, South Africa, and Australia; a Zoological collection representing the Canadian fauna by a large number of prepared specimens of mammals, birds, reptiles, fishes, insects, and mollusca.

THE LABORATORIES

The Biological Laboratories are on the main floor and in the basement of the Old Arts Building. There is a large laboratory for General Botany, one for General Zoology, and one for Medical Biology, as well as smaller laboratories for Plant Physiology and Advanced Botany. Laboratories are available also for research in Plant Physiology, Cytology, and the growth of populations.

The Chemical Laboratories are in Gordon Hall. On the fourth floor are the laboratories of Medical Organic, Biochemistry, and Water Analysis. On the third floor are two laboratories for General Chemistry, and a laboratory for Electro-chemistry and Colloid Chemistry. On the second or main floor are two laboratories for Quantitative Analysis, two for Organic Chemistry, and one for Industrial Chemistry. On the first or basement floor are three laboratories for Qualitative Analysis, and two for Physical Chemistry. Besides these there are a number of small separate laboratories for research work.

The Physical Laboratories occupy the major part of Ontario Hall. The basement contains the large elementary laboratory, the liquid air room, numerous research laboratories and the research workshop. The main floor is given over to undergraduate lecture and laboratory rooms. The second floor has two large lecture rooms, laboratory room for advanced undergraduate classes and for research. The attic is used for workshop and storage purposes.

The Psychological Laboratory is on the fourth floor of the Craine Building, and is equipped for both human and animal work. A small shop is available for the construction of apparatus. A large laboratory is used for elementary work and for undergraduate experiments, in addition to several smaller laboratory rooms for other research. Apparatus includes standard equipment for demonstration in general and comparative psychology.

The Geological and Mineralogical Laboratories are in Miller Hall. In the basement is a laboratory for the preparation of rock sections and for photography and an X-ray laboratory equipped with a Hilger X-ray spectrograph. On the second floor a laboratory occupying the west wing is for elementary classes in Geology. Along the north side of the building is a map room and the petrographical laboratory. On the south side a large drafting room is used by senior students for the preparation of maps and sections required in field courses. On the third floor at the west end is a large laboratory for blowpipe analysis, a dark room equipped with a two circle goniometer, monochromator and Abbé refractometer. The east wing is a laboratory for postgraduate students, a dark room for photography, a chemical laboratory with space for twelve students, a grinding room for preparation of polished surfaces and an adjoining optical laboratory for petrographic and mineralographic work. Smaller laboratories for research work are equipped with a Hilger E316 spectrograph, a Hallimond Electromagnetic concentrator and facilities for examination of ores by polarized light.

THE MUSIC ROOM

The Music Room in the Douglas Library is furnished and equipped for music study and listening. It houses the Carnegie collection of more than a thousand gramophone records, and a number of musical scores and books which are available on loan through the usual library facilities. The equipment also includes a Steinway grand piano-forte, a radio-phonograph, and a high-fidelity phonograph with separate loud-speaker console. The room is open every afternoon during the session, including Saturday and Sunday.

THE UNIVERSITY CONCERT SERIES

The programme for session 1948-49 was as follows: Rosalyn Tureck, pianist; Uta Graf, soprano; the Vienna Boys' Choir; and the Toronto Symphony Orchestra.

The series for 1949-50 includes the Montreal Women's Symphony Orchestra; Bartlett and Robinson, duo-pianists; and the Greenwich Village Opera Company.

In addition there is The Young Artists' Series including Pearl Palmason, violinist and the winner of the Singing Stars of Tomorrow Contest.

FACILITIES FOR FIELD WORK

Geology and Mineralogy. In the vicinity of Kingston a greater variety of economic minerals and metalliferous ores is mined than in any similar area in Canada. Through the kindness of the managers the various mines may be visited by the Geology and Mineralogy classes, and students may thus obtain valuable information concerning field conditions.

Botany and Zoology. Exceptionally good facilities for field study are provided in the vicinity of Kingston by the great diversity of land surfaces and bodies of water. A wide range of plant and animal associations are within easy reach of the University. The University has an experimental station on Lake Opinicon, thirty-two miles from Kingston, for research in land and water biology.

FACILITIES FOR ATHLETICS

Queen's University provides ample facilities for athletics. The gymnasium is one of the finest in Canada with a swimming pool of full olympic size. In the University grounds is a large covered skating rink with artificial ice. Adjoining the University is the football field, with the George Richardson Memorial Stadium, given by Dr. James Richardson, formerly Chancellor of the University, in memory of his brother, Captain George Richardson, a graduate of Queen's and a former athlete who was killed in the Great War. There is room and equipment for all students who wish to take part in football, hockey, badminton, basketball, field hockey, tennis, track athletics, archery, swimming, diving, boxing, and wrestling. Exceptionally good facilities for skiing are available at Kingston Mills about five miles from the University proper.

GENERAL INFORMATION

DEGREES

By the Royal Charter granted to Queen's College, it is "willed, ordained and granted, that the said College shall be deemed and taken to be an University, and that the students in the said College shall have liberty and faculty of taking the degree of Bachelor, Master, and Doctor in the several Arts and Faculties".

The degrees at present conferred under the statutes of the University are as follows:

I.—HONORARY DEGREES

Doctor of Divinity, D.D.; Doctor of Laws, LL.D.

II.—DEGREES BY EXAMINATION

1.—In Arts

Bachelor of Arts, B.A.; Bachelor of Commerce, B.Com.; Master of Arts, M.A.; Master of Commerce, M.Com.; Doctor of Philosophy, Ph.D.
Diploma in Laboratory Technique.

2.—In Theology

Bachelor of Divinity, B.D.

3.—In Medicine

Doctor of Medicine, M.D.; Master of Surgery, C.M.; Diploma of Public Health, D.P.H.; Master of Science, M.Sc.(Med.); Diploma in Medical Radiology.

4.—In Applied Science

Bachelor of Science, B.Sc.; Master of Science, M.Sc.

5.—School of Nursing

Bachelor of Nursing Science, B.N.Sc.

6.—School of Physical and Health Education

Bachelor of Arts, B.A.; Bachelor of Physical and Health Education, B.P.H.E.

HOODS

Each Degree has its distinctive hood, as follows:

B.A.—Black, bordered with red silk.

B.Com.—Black, bordered with green silk.

- M.A.—Black, lined with scarlet silk, bordered with scarlet silk.
M.Com.—Black, lined with green silk, bordered with green silk.
B.D.—Black lined with purple silk bordered with purple silk.
M.D. and C.M.—Scarlet silk, bordered with white silk.
M.Sc. (Med.)—Scarlet silk lined with white silk, bordered with white silk.
B.Sc.—Black, bordered with yellow (old gold) silk.
M.Sc.—Black, lined with yellow silk, bordered with yellow silk.
B.N.Sc.—White silk, bordered with scarlet silk.
D.Sc.—Yellow silk, bordered with black.
D.D.—Purple silk, lined with white silk, bordered with white.
LL.D.—Black silk, lined with blue silk, bordered with blue.
Ph.D.—Black silk, lined with purple, bordered with white.

COUNCIL OF LEGAL EDUCATION OF GREAT BRITAIN

Queen's University has been approved by the Council of Legal Education of Great Britain and her degree examinations now qualify students for admission at any one of the four Inns of Court. Regulations for entry at any one of the Inns may be seen at the office of the Registrar.

THE STUDENTS' MEMORIAL UNION

The first Students' Memorial Union which was built to commemorate the service of students and graduates of Queen's University in the First World War, was destroyed by fire in September 1947, immediately before the opening of the session. Temporary dining and lounging accommodation for men students was arranged in McLaughlin Hall and reconstruction on the Union was begun at once. By September 1948, the Great Hall, the coffee shop and some lounge rooms were ready for use. The completed building will be opened formally in October 1949.

Every male student is a member of the Union which is really a club where the men of all Faculties may meet in a University building designed for that particular purpose and privilege.

There are the usual club facilities, a dining hall, lounge and billiard rooms, reading rooms, committee rooms, and guest rooms for alumni and visitors to the University.

CO-OPERATIVE RESIDENCES

Berry House and Collins House, operated by the Science '44 Co-operative Inc., are open to men students of all faculties. Room and

board for the session 1948-49 was \$10 per week. For further information write to the Membership Committee, 144 Lower Albert Street, Kingston, Ontario, enclosing a self-addressed, stamped envelope.

INFORMATION FOR WOMEN STUDENTS

The Dean of Women is ready to give women students information and advice on any matter pertaining to their life at the University. She should be notified immediately in case of illness.

The University Residences

Rooming and Boarding Houses

All first year women students under twenty-five and not resident in the city of Kingston are required to live in Ban Righ Hall or in one of its annexes; or if the accommodation is inadequate the University Housing Office will help the student to find suitable lodgings and she will board in Ban Righ Hall.

(For the purpose of this regulation students who have credit for five or more classes at the University, taken either intramurally or extramurally, will not be considered to belong to the first year.)

All other women students not resident in the city of Kingston nor in one of the university residences may apply to the University Housing Office for assistance in finding suitable lodgings.

During the summer the university residences are open for the benefit of all women students attending the Summer School and the services of the Housing Office are available.

Application forms for admission to the university residences, full information concerning the residences, the rates charged and rules in force may all be obtained from the office of the Dean of Women.

Academic Dress

During the winter session women students are expected to wear academic gowns at lectures. These gowns may be ordered in Kingston after the opening of the session or they may be made from patterns purchased through the office of the Dean of Women.

Gymnasium Costume

The gymnasium costume worn by women students is a regulation blue romper which may be obtained on arrival. White badminton shoes and socks are worn with the suit.

Any bathing suit may be worn in the University swimming pool.

CO-OPERATIVE RESIDENCES

Boucher House, operated by the Science '44 Co-operative Inc., is open to women students who have completed their first academic year.

Room and board for the session 1948-49 was \$10 per week.

For further information write to The Membership Committee, 144 Lower Albert Street, Kingston, Ontario, enclosing a self-addressed, stamped envelope.

EXPENSES

At the present time the average cost of a student's board is from \$7.50 to \$9.50 a week and for a room from \$3.50 to \$5.00 a week.

Lists of Boarding Houses for men students may be obtained from the Secretary, Housing Bureau, Queen's University. Meals may be obtained at the cafeteria in the Students' Union.

See FEES for other expenses.

PHYSICAL WELFARE OF STUDENTS

A. HEALTH INSURANCE

Queen's University administers a Health Insurance Fund by arrangement with the Alma Mater Society and with the Summer School Association. This fund is derived from a special fee of \$4 paid by each winter student and \$1 paid by each Summer School student and is used to provide medical and hospital care as follows:

I. MEDICAL CARE.

The services of the University Medical Officer are available to students without charge.

Office: Kingston General Hospital—Telephone 5521. Entrance by way of the Ambulance driveway (on Stuart Street, west of Front Entrance), turning left and up the short flight of steps.

Hours: Women: 1.30-2.00 p.m. Tuesday to Friday, Monday 2.00 p.m.

Men: 4.30-5.30 p.m. Monday to Friday.

All students: Saturday 1.15-1.45 p.m. Sundays by appointment.

A student may choose another physician or obtain the services of a specialist, surgeon or consultant but the University pays no part of the charge thus incurred.

II. HOSPITAL CARE.

Hospital services, including room, food, ordinary medicines and treatment and care of nurses-in-training, are provided at the Kingston General Hospital subject to the following provisions and limitations:

A. *Term of Insurance.* The purpose of Health Insurance is to provide for the incidental illnesses of students. It is not for those whose term of illness is so long as to cause loss of year or of residence credit. In the winter it is in force from the day of registration till the day of the last examination in the spring. In the case of those about to graduate it is extended to the day of Convocation. In summer it is in force from the day of registration till the last day of lectures.

B. *Admission.* Hospital care under the plan is available only to students whose admission is ordered or approved by the University Medical Officer.

C. *Discharge.* The University Medical Officer will decide when a patient is ready for discharge and the benefits of the plan will cease upon that date.

D. *Special Charge to Patients.* Each student will pay to the hospital in which he is a patient fifty cents a day from the date of admission to the date of discharge under the provisions of Sections A, B, and C above.

E. *Room.* The plan provides for semi-private room only, unless in the judgment of the Medical Officer the condition of the patient requires a private room. If the patient engages a more expensive room than the Medical Officer selects, he must pay the difference in cost.

F. *Nurses.* The services of the regular floor nurses are included in hospital care, but if special nurses over and above the regular staff are required or engaged the cost must be borne by the patient.

G. *Chronic Illness and Operations.* Hospital care does not apply to chronic illness which does not demand immediate attention. Nor does it cover operations not of an emergency character, e.g., removal of tonsils or removal of quiescent appendix.

H. *Special Treatments.* The University will not pay for X-ray examinations or for treatments involving special charges (for example, massage, electrical treatments and surgical consultations). For the benefit of mining students and others in groups of ten the Kingston General Hospital gives the following special rates for X-ray examinations:

One flat film of the chest—\$3.

Stereoscopic film, if required—\$5.

I. *Out-patients.* The Kingston General Hospital will provide ordinary out-patient service without charge and will fill prescriptions issued by the Medical Officer at a charge of 25 cents for ordinary prescriptions and at actual cost of drugs not included in the Hospital pharmacopoeia.

B. PHYSICAL EXAMINATION

All students registering for the first time at a winter session of the University are required to have a physical examination. At the beginning of the session the University Medical Officer sets up a panel of physicians and psychiatrists to make the examinations. Each student is given an appointment. Those for whom the hours named are inconvenient should arrange for other students to take their places.

C. X-RAY CHEST SURVEY

By a regulation of the Senate of the University the students in the first and fifth years of the Medical Faculty and the first and final years of the other faculties and schools are required to have an X-ray examination of the chest each year. An appointment is made for each student and anyone who fails to report is required to take the X-ray at some time later at his own expense.

D. CERTIFICATE COVERING ABSENCE FROM CLASS

A student not receiving hospital care but alleging illness as a reason for missing lectures or laboratory work must present a doctor's certificate immediately at the close of treatment in order to receive consideration. Ordinarily absences beyond a total of one-eighth of the possible attendance, whether due to illness or any other cause, will subject candidates to the penalties specified in the Calendar for deficient attendance.

VACCINATION

Every student registering for the first time must submit evidence of successful vaccination.

STUDENT SELF-GOVERNMENT

Queen's was the first University in Canada to introduce student self-government. All students are members of the Alma Mater Society, the chief instrument of student government, and are expected to share in its duties and responsibilities.

ALMA MATER SOCIETY LECTURE

In 1939, as a contribution from the student body to the Centenary Endowment Fund, the Alma Mater Society gave the University its accumulated reserve of \$1,711. The income is used to provide an annual lecture known as the Alma Mater Society Lecture.

FRATERNITIES

By resolution of Senate no student registered with the University may form or become a member of any chapter of any externally-affiliated fraternity or sorority at or near Kingston.

MILITARY SERVICES

University Naval Training Division

The University Naval Training Division, Queen's University, was organized in March, 1943, under the direction of Lieutenant S. T. Hill, Commanding Officer H.M.C.S. "Cataragui".

University Naval Training Divisions were established in Canadian Universities during the war to provide naval training for university students before entry into active service in the Navy. From this source came many hundreds of keen young men who had an excellent war record in the service. These Divisions are being continued in the universities to provide a Naval Officers' training programme through which university students may become commissioned officers in the Royal Canadian Navy (Reserve). Opportunity is provided also in certain branches for entry into Royal Canadian Navy (Permanent Force) as commissioned officers who will follow the Navy as a career.

The programme consists of sixty hours' training during the academic year given at H.M.C.S. "Cataragui", and a minimum of two weeks' training aboard ship during the summer.

Canadian Officers' Training Corps

The Queen's University Contingent of the C.O.T.C., formed in 1914 by Lt.-Col. A. B. Cunningham and reorganized following the First World War by Colonel A. Macphail, C.M.G., D.S.O., is now commanded by Lt.-Col. E. A. Walker.

The object of the C.O.T.C. training policy is to qualify selected University undergraduates for commissions on graduation in the various corps of the Active Force, Reserve Force, and Supplementary Reserve Force of the Canadian Army.

The training programme consists of a short theoretical course in Military Studies at the University and annual practical military training for a period of approximately four months at the Active Force Corps Schools at officers' rates of pay.

EMPLOYMENT SERVICE

An Employment Service has been in successful operation at the University for several years. It is under the jurisdiction of the Service Control Committee of the Engineering Society and administered by the Secretary of the General Alumni Association. It is financed by the Engineering Society and the University. The objects of the Service are to assist graduates in all Faculties to secure suitable positions, and to help students to obtain work during vacation periods.

Communications should be addressed: Manager, Employment Service, Queen's University.

REGISTRATION

All students are required at the beginning of each session to have their names entered upon the University Register.

Intramural students must register *in person*, paying full fees for the session. Those registering before the opening of the session are charged the regular fee, but those registering on or after the first day of the session are charged an extra fee of \$3. In addition, those who have not previously obtained permission to defer registration must pay a special late fee of \$1 a day from September 22 to October 1. No student may register after October 1 unless he has obtained special permission before the opening of session.

For extramural registration see REGULATIONS REGARDING EXTRAMURAL WORK.

ADMISSION TO THE FACULTY OF ARTS

1. Candidates desiring to enter the Faculty of Arts should make application during the summer on forms supplied by the Registrar.

The application should be accompanied by matriculation or other certificates. These will be returned when the candidate's standing has been determined.

I—ADMISSION BY MATRICULATION

2. Matriculation examinations are conducted for the universities of Ontario by the University Matriculation Board. Details regarding these examinations may be found in a separate publication entitled **ENTRANCE REQUIREMENTS**. This booklet contains also a list of the Entrance and Matriculation Scholarships and the conditions of award.

3. The requirement for admission to the Faculty of Arts is:

- (a) The Secondary School Graduation Diploma (General Course) or its equivalent, including English, a second language, History and Mathematics.
- (b) Grade XIII standing or its equivalent in English, Latin or Mathematics (at least two papers) and two or three other subjects. Students entering with as few as four subjects, that is, English, Latin or Mathematics and two further subjects, are required to have not lower than third class Honours standing in at least three of these subjects.

Candidates preparing for Commerce and for the courses in Mathematics should offer all three papers of Grade XIII Mathematics. Candidates entering Mathematics 2 with standing in only two parts of Grade XIII Mathematics are required to attend a tutorial class and pass an examination in the third part before receiving credit for Mathematics 2.

4. Grade XIII examinations are held in the following subjects: Latin, English, History, Mathematics (Algebra, Geometry, Trigonometry, and Problems), Greek, German, French, Spanish, Music, Physics, Chemistry, Biology. The pass standard is fifty per cent. in each paper.

5. Candidates with the Interim First Class Certificate who have successfully qualified for the Permanent First Class Certificate by attending a second year at an Ontario Normal School are allowed towards an Arts degree one course in each of English and History.

6. A complete outline of the Courses for degree is given under every subject in the departmental regulations. Candidates for admission to Honours courses should write the Grade XIII papers in the two

subjects which will be the Major and Minor for the degree of B.A., and three others chosen from the compulsory courses on the degree programme they wish to follow. The most useful selection of subjects is listed under the various courses. Other selections are acceptable but must include English and Latin or Mathematics. Candidates preparing for Honours in English and History are advised to take in Grade XIII

English (*Literature and Composition*)

History

Latin (*Authors and Composition*)

one of French (*Authors and Composition*)

German (*Authors and Composition*)

Greek (*Authors and Composition*)

a science which may be selected from Biology (Botany and Zoology), Chemistry, Physics

Similarly candidates for Honours in modern languages are advised to take Grade XIII

English (*Literature and Composition*)

Latin (*Authors and Composition*)

two of French (*Authors and Composition*)

German (*Authors and Composition*)

Spanish (*Authors and Composition*)

a science which may be selected from Biology (Botany and Zoology), Chemistry, Physics

Candidates interested in Honours Classics are advised to take

English (*Literature and Composition*)

Latin (*Authors and Composition*)

Greek (*Authors and Composition*)

a science which may be selected from Biology (Botany and Zoology), Chemistry, Physics

a fifth subject which may be freely chosen

Candidates interested in a course in History or Economics or Philosophy are advised to take

English (*Literature and Composition*)

History

Latin (*Authors and Composition*) or Mathematics (at least two of Algebra, Geometry, Trigonometry)

a science which may be selected from Biology (Botany and Zoology), Chemistry, Physics

ADMISSION TO THE FACULTY OF ARTS

one of French (*Authors and Composition*)
 German (*Authors and Composition*)
 Greek (*Authors and Composition*)

Candidates preparing for a course in Mathematics are advised to take

English (*Literature and Composition*)
 Mathematics (Algebra, Geometry, Trigonometry)
 Physics

one of French (*Authors and Composition*)
 German (*Authors and Composition*)
 Greek (*Authors and Composition*)

a fifth subject which may be a foreign language or a science

Candidates for a course in science are advised to take

English (*Literature and Composition*)
 Mathematics (Algebra, Geometry, Trigonometry)
 one of French (*Authors and Composition*)
 German (*Authors and Composition*)
 Greek (*Authors and Composition*)

two of Chemistry, Biology (Botany and Zoology), Physics,
 selected so as to give standing in the two sciences in which
 the candidate wishes to proceed.

Candidates preparing for Commerce are advised to take

English (*Literature and Composition*)
 Mathematics (Algebra, Geometry, Trigonometry)
 Students from High Schools of Commerce may offer Grade
 XIII standing in Mathematics of Investment in place of
 Algebra as part of the requirement in Mathematics.

a science which may be selected from Biology (Botany and
 Zoology), Chemistry, Physics

a language

a fifth subject which may be a language or a science not al-
 ready offered.

Candidates preparing for a general Pass course are advised to take

English (*Literature and Composition*)

Latin (*Authors and Composition*) or Mathematics (at least two
 of *Algebra, Geometry, Trigonometry* — see Section 3(b),
 p. 46), three further subjects which may be selected at
 will from the subjects of Grade XIII (see page 46).

Candidates preparing for the Combined Course leading to a degree in Arts and a degree in Physical and Health Education are advised to take

English (*Literature and Composition*)

Mathematics (two of *Algebra, Geometry, Trigonometry*)

two of Biology (*Botany and Zoology*)

Physics

Chemistry

plus one other subject which may be freely chosen from the subjects of Grade XIII (see page 46).

ADMISSION OF EX-SERVICEMEN AND WOMEN

A. Ex-servicemen and women applying for admission to the Faculty of Arts are required to offer Matriculation standing as approved by the National Conference of Canadian Universities in June, 1944, as follows:

Grade XII:

1. English
2. French or another language
3. Mathematics (Algebra and Geometry)
4. One of: History

A language not already chosen selected from Latin, Greek, French, German, Spanish or Italian

A science: Physics or Chemistry or Agriculture

If, in addition, they can offer subjects at Grade XIII level, they are granted standing up to a total of five. Ex-servicemen and women entering with as many as four subjects of Grade XIII, are admitted to the second year without condition.

B. Queen's University works in close co-operation with the Kingston Branch of the Department of Veterans Affairs and facilitates where possible all matters pertaining to the training provisions as set out in Post Discharge Re-establishment Order, P.C. 5210.

II—ADMISSION BY EQUIVALENT EXAMINATION

A. Examinations Equivalent to the Ontario Secondary School Graduation Diploma

The following certificates recognized as equivalent to the Ontario Secondary School Graduation Diploma may be accepted in so far as they meet the admission requirements of Queen's University:

Alberta Junior Matriculation (Grade XI).

British Columbia Junior Matriculation (Grade XII).

Manitoba	Grade XI.
New Brunswick	Junior Matriculation.
Newfoundland	Associate (Junior).
Nova Scotia	Grade XI (average 60, minimum 50).
Prince Edward Island	First Class License or Second Year Certificate from Prince of Wales College.
Quebec	{ The Quebec High School Leaving. McGill Junior Matriculation.
Saskatchewan	
	Grade XI.

B. Examinations Equivalent to Grade XIII

The following certificates are recognized as equivalent to the Ontario Grade XIII certificate in the subjects in which at least 50% has been made in each paper.

Alberta	Senior Matriculation (Grade XII).
British Columbia	Senior Matriculation (Grade XIII).
Manitoba	First Class.
New Brunswick	Grammar School or First Class Li- censes.
Newfoundland	Associate (Senior Grade).
Nova Scotia	Grade XII.
Prince Edward Island	Honour Diploma of Third Year, Prince of Wales College.
	{ McGill Senior Matriculation.
Quebec	{ Senior High School Leaving Certi- ficate.
Saskatchewan	
	Grade XII.
Great Britain	The School Certificate of the various English Universities and the Cen- tral Welsh Board; the candidate will be granted Grade XIII stand- ing in those subjects in which he has obtained "credit". Similar standing will be given those having the Leaving Certificate of the Scot- tish Education Department pro- vided that the subjects are of the Higher Standard.

III—ADMISSION TO ADVANCED STANDING

Students applying for admission to advanced standing with allowance on credits at another University must have an official certificate of standing with a statement of honourable dismissal forwarded to the Registrar for consideration. They are given equivalent stand-

ing but must comply with all regulations of Queen's University governing the Course they wish to complete.

No credits obtained at another institution are accepted for any of the last five classes offered by a candidate for degree at Queen's.

IV—ADMISSION BY SPECIAL REGULATION

Unmatriculated students who present certificates showing that they are over the age of twenty-one years may be admitted conditioned in the subjects of matriculation if they satisfy the Board of Studies that they can profitably undertake University work.

Candidates admitted under this regulation may remove entrance conditions by passing course one of the subject in which they lack matriculation; they may remove conditions in languages by passing a preparatory course in the language concerned, e.g. German A, Spanish A. They should note that a course used to remove an entrance condition may not be counted as a credit towards a degree.

REGULATIONS REGARDING EXTRAMURAL WORK

All inquiries regarding regulations should be addressed to the Registrar.

In order to meet the needs of students who are unable to do all their work in residence, of teachers in actual service who wish to improve their professional qualifications in certain subjects, and of those who, though unable to attend the regular classes, are yet desirous of studying under competent direction, the University conducts a system of extramural instruction. This work is as nearly as possible identical with that taken up by the intramural students and the same examinations are set for all. Candidates who fulfil the requirements of residence and otherwise comply with the conditions stated below may qualify for the various degrees to which their courses lead.

For details of the work offered for the summer of 1949 and winter 1949-50 see page 59.

Conditions of Admission to Extramural Work

1. Extramural students are of two types—special and regular.

(a) *Special* students are those who do not wish to proceed towards a degree. They may register for any courses in which they are particularly interested but must conform to regulations regarding date of registration, fees and regularity of work.

Special students are subject to all the regulations affecting regular students (see page 95, section 2).

(b) *Regular* students are those who are taking work towards a degree.

2. Except with the permission of the Board of Studies no one is permitted to register at Queen's University in the same session as he is taking work from another educational institution, or writing on any examinations other than those leading to the Secondary School Graduation Diploma. No credits obtained at another institution are accepted for any of the last five courses offered by a candidate for a degree at Queen's University.

3. As in the case of intramural students, the requirement for admission to the Courses of study leading to the degree of Bachelor of Arts is

(a) The Secondary School Graduation Diploma (General Course) including English, a second language, History and Mathematics.

(b) Grade XIII standing in English, Latin or Mathematics (at least two papers) and two or three other subjects. Students

entering with as few as four subjects, that is, English, Latin or Mathematics and two further subjects are required to have not lower than third class Honours standing in at least three of these subjects.

Unmatriculated students who present certificates showing that they are over the age of twenty-one years may be admitted conditioned in the subjects of Matriculation if they satisfy the Board of Studies that they can profitably undertake University work. Candidates admitted under this regulation may remove entrance conditions by passing course 1 of the subject in which they lack Matriculation; they may remove conditions in language by passing a preparatory course in the language concerned, e.g., German A, Spanish A. They should note that a course used to remove an entrance condition may not be counted towards a degree.

Candidates holding the Interim First Class Teaching Certificate may register extramurally on academic courses leading to the Permanent Certificate even though they do not offer the full Matriculation requirement for admission to the Faculty of Arts. If such candidates wish to proceed to a degree in Arts they must remove entrance conditions as indicated above.

4. Intramural students may become extramural students only by special permission of the Faculty.

Registration in Extramural Courses

5. There are two sessions in the year for extramural students. The winter session begins in September and ends with the April examinations; the summer session begins in April and ends with the September examinations. The Summer School forms part of the summer session though it is possible to work extramurally in certain courses throughout the summer without attending the Summer School.

Applications for registration must be made on forms supplied by the Registrar, and must satisfy the conditions stated in section 6. They must reach the University by the dates mentioned in section 7; and they must be accompanied by the fees specified in section 8.

6. (a) Extramural students may not register for more than four courses in the academic year. They may register in the winter (September-April) for as many as two courses or four half-courses, and in the summer* (April-September) for two courses or three half-courses.

*The Calendar is issued in the spring but is not in force until the following autumn. The work of advanced whole courses given at the Summer School is based on the prescription in the calendar for the next session, since these courses are completed during the following winter.

(b) The courses selected in each year are subject to the approval of the Board of Studies and, in the case of candidates for degrees, must conform to the regulations for concentration, distribution, and sequence of work.

(c) Before registering students should consult the time-table of lectures, as they may not register for either winter or summer work in two courses which meet at the same hour. The summer time-table is given in the Announcement of Summer School and Extramural Work.

7. (a) Extramural students should register two or three weeks before the session opens so that they may receive the preliminary instructions and provide themselves with books in time to start work promptly. They are allowed to register up to September 17 for the winter or April 10 for the summer at the regular fee, and up to September 24 or April 17 on payment of an extra fee of \$3. Only under exceptional circumstances and by special permission of the Faculty is registration accepted after these dates.

(b) Extramural students may not receive the examination returns before the last date of registration but they should send fees to the Registrar within the required dates, stating the courses in which they wish to register if successful in their examinations. Necessary changes may be made later.

8. The fees payable upon application for registration are as follows:—

Extramural and Summer School Fee

(a) This is a single inclusive fee covering registration by the specified date, use of the library, tuition whether given extramurally or in the Summer School or partly each way, and the first examination (not a supplemental) if taken within two years. For a student in the Summer School the fee also includes health insurance, athletics, the MacClement Scholarship contribution and membership in the Summer School Association.

\$36.00 for each whole course.

18.00 for each half course.

Entrance Fee

(b) Students registering for the first time are required to pay an entrance fee of \$5.00.

Fee for Pro Tanto Allowance

(c) Students wishing to have courses credited towards a degree on work done at other academic institutions, must pay a fee of \$5.00 for *pro tanto* allowance at the time of their first registration.

Fees may be paid in two equal instalments, in which case an additional \$1 is added to the first instalment. Students registering in September must pay the first instalment by September 17, the balance on or before December 1. Students registering in April must pay the first instalment by April 10, the balance on or before July 2.

9. Minimum Residence Requirements

The University does not undertake to make it possible for a student to get a degree by satisfying merely the minimum residence requirements given below, since in some subjects only a limited amount of instruction can be given extramurally or in the Summer School. In the Sciences, for example, all the laboratory work must be done at the University and a student specializing in these subjects may find it necessary to spend two or three years in residence.

Candidates for degree must complete successfully at least two winter sessions, or one winter and three summer sessions, or five summer sessions in attendance at the University. Intramural students transferring from universities of accepted standing to the final year of their Course may complete residence requirements by attending one regular winter session or two Summer Schools.

Manner of Conducting Extramural Classes

(See also section 22)

10. The method of giving extramural instruction necessarily varies with the subject. Detailed information is contained in the instruction sheets provided from time to time. These specify the prescribed reading, assign exercises and essays to be written, and in some cases give the substance of intramural lectures. The first instalment of work is sent to students as soon as they register. The date of each essay or exercise coming in, and of each criticism or fresh piece of work going out, is recorded at the office of the Department of University Extension. Each essay or exercise is examined and returned to the writer with criticisms and suggestions.

Students should address their work and all enquiries regarding their work to the Department of University Extension, Queen's University, Kingston, Ontario.

Regularity of Work

11. All exercises must be sent in by the dates specified or they will be returned unmarked and without credit.

Transference from Extramural to Intramural Classes

12. Extramural students may become intramural students during the winter session, *in those courses in which they have satisfactorily completed the work prescribed up to the date of transferring.* Fees already paid will be applied on intramural charges.

13. Students who transfer to intramural work before January may add enough half-courses to give them five courses in the second term if such half-courses are available and the prerequisite work has been done.

Library Facilities for Extramural Students

14. Extramural students are expected to buy all text-books prescribed. They should also make generous provision for the purchase of other books bearing on their work, as the library cannot undertake to provide enough duplicates to serve all the needs of students not in residence.

15. Three books may be borrowed at one time, provided that no two relate to the same piece of work. Unless a special arrangement is made, a book may be kept only two weeks from the date on which it is received.

16. No fee is charged for the use of the library but extramural students must send to the Librarian a deposit of \$2 for the use of one book, \$4 for two books, and \$5 for three, as insurance against loss. Books may be exchanged as often as the borrower wishes; and when all are returned the deposit will be repaid on request.

17. All communications concerning books and deposits must be addressed to The Librarian, Queen's University, Kingston, Ontario.

Regulations Regarding Examinations

Intramural and extramural examinations are the same in all subjects and are held at the same time. It is impossible, therefore, to modify the examination schedule to suit the personal convenience of students.

18. Examinations are held in January, April, and September, as follows:—

(a) Examinations in half-courses of the first term are held in January (see page 6).

(b) Examinations in all whole courses and in half-courses of the second term are held in April. Examinations in Pass courses (numbered under 10) and in such Honours courses as may be offered in the summer, may be postponed until the autumn, but postponement lessens the amount of new work which may be completed in September.

(c) Ordinarily an extramural student may not write in September on more than two courses or three half-courses. He may, however, write on three courses, if examinations in one or more have been postponed from April.

19. Applications for examination in the particular courses on which a student proposes to write, accompanied by the proper fees, must reach the office of the Department of University Extension by December 1 for the January examinations, by February 10 for the April examinations, and by July 10 for the September examinations. The fees for supplemental examinations are \$3 for each half course examination and \$6 for each whole course examination, with an additional charge of \$3 for late application if accepted.

20. *Candidates are charged a fine of \$2.00 if they fail to notify the Registrar, at least ten days before the beginning of the examinations, that they do not intend to write on a subject for which they have applied.*

21. Students are not admitted to examination in any course in which they have not fulfilled the requirements as to date of registration (see section 7) and regularity of work (see section 11). Candidates are expected to send in all the essays and exercises at the dates specified. No candidate who has done less than seven-eighths of the prescribed work is admitted to examination. The last of the written work should reach the University at least two weeks before examinations begin.

22. Students who in any session do not complete the required work in a course, must register again, pay all the fees and do all the exercises.

23. Extramural and Summer School students who fail in any course may write a supplemental examination in that course at the next regular examination period provided that an examination is offered. This ruling applies to all pass courses and to the first course in honours.

Students who have obtained credit in any course may, to raise their standing, write the examination at any subsequent examination period not later than the third examination period after first passing it. Ex-servicemen and women affected adversely by this regulation may be given consideration by the Board of Studies who will recommend action to the Faculty of Arts.

24. Students who fail in any course may not come up again for examination in that course except for a supplemental examination as provided in section 23 without registering in the course and repeating the full work.

25. Students may postpone examinations in a given course for two years from the date of the first registration in that course provided they have completed seven-eighths of the required exercises and all

the required essays. Students are warned that they postpone examinations at their own risk since no special papers will be set even though courses are discontinued or radically changed. *Students who postpone an examination for more than two years must repeat the tutorial work.*

26. Extramural students in any of the modern languages must satisfy the Department concerned as to their oral qualifications. When an oral examination is necessary, it must be taken at the university. Students attending the Summer School are given an opportunity to complete the oral work in the languages in which courses are offered.

27. Practical examinations in Science must be taken at the University.

28. Examination centres have been established in most of the larger cities and towns throughout Canada and a list of such centres is sent to all extramural students a month in advance of the examinations. Consideration is given to an application to establish a new centre. The application, accompanied by the special fee of \$10, must be made by November 10 for January examinations, by February 10 for April examinations, and by July 10 for September examinations.

Determination of Standing

29. See sections 27 and 30 of GENERAL REGULATIONS on pages 99 and 100.

Fees for Extramural Students

30. A full statement regarding fees may be found under FEES.

31. Extramural students who enter as intramural students during the winter session will have their extramural fees applied on intramural charges. (See section 12.)

32. *No refunds will be made.* In case of sickness, but under no other conditions, an application to have fees *carried over* will be considered if it is made within one month of registration and is accompanied by a doctor's certificate.

Text-books

33. Texts may be obtained from the Technical Supplies Store, Queen's University Grounds.

EXTRAMURAL AND SUMMER SCHOOL WORK

On pages 59 and 60 tables show the Courses offered through extramural and Summer School instruction in the summer of 1949 and the winter of 1949-50 and the cycle of courses for the next five years.

Beginning with the summer of 1949 fewer courses are being offered in any one summer session but they are planned so that students' degree programmes may be completed in the normal time. In each Calendar there will appear a cycle of courses for five years in advance. Students should plan their extramural and Summer School work in accordance with this cycle. It is expected that every course listed in the cycle will be given as advertised and that it will not be necessary to cancel any course for lack of registration.

EXTRAMURAL WORK — SUMMER 1949, WINTER 1949-50

	Summer Extramural: if the course is offered at the Summer School as well as by correspondence it is marked with an asterisk.	Winter Extramural
Latin	1, 2*	1, 2
Greek	A, 1, 2	A, 1, 2
Greek and Rom. Hist.	4*	4
Classical Literature	1	1
English	1, 2*	1, 2, 14a, 14b, 20
French	1, 2*	1, 2
German	A*, 1*, 2	A, 1, 2, 10
Spanish	A*, 1*, 6	A, 1, 2, 6, 10
History	3, 6	3, 6
Economics	4*	4
Politics	2	2
Commerce	63	63
Philosophy	1*, 3	1, 3
Psychology	2*, 4*	2, 4
Mathematics	1, 2*, 3b*, 7a*, 10a, 11b	1, 2, 3b, 7a, 10a, 11b
Physics	1*, 2	1, 2 (continued at S.S.)

* see table on page 60

SUMMER SCHOOL COURSES — 1949-1953

	1949	1950	1951	1952	1953
Art	2	3	1	2	3
Astronomy	1		1		1
Biology	1, 10	1, 16	1, 10	1, 16	1, 10
Chemistry	2	1	2	1	2
Classical Liter.		1		1	
Commerce		63*		63*	
Drama	1*	1*	1*	1*	1*
Economics	4*		4*		4*
English	2*, 5, 10*	2*, 3, 15*	2*, 5, 10*	2*, 3, 15*	2*, 5, 10*
French	2, 10*	1	2, 3 or 12*	1	2, 3, 10*
Geol. & Geography	1		1		1
German	A, 1	A	A, 1	A	A, 1
Greek & Rom. Hist.	4		4		4
History	5, 16*	3, 13*	6, 16*	3, 13*	5, 16*
Latin	2	1	2	1	2
Mathematics	2, 3b, 7a	2, 10a, 11b	2, 3b, 7a	2, 10a, 11b	2, 3b, 7a
Music	1*	1*, 2	1*	1*, 2	1*
Philosophy	1*	1*	1*	1*	1*
Psychology	2, 4	2, 16	2, 4	2, 16	2, 4
Physics	1	1, 2	1	1, 2	1
Politics		2*		2*	2*
Spanish	A, 1	A, 1	A, 1	A, 1	A, 1

The courses marked with an asterisk are given as two-hour courses in the Summer School without preliminary exercise work.

THE SUMMER SCHOOL

The fortieth session of the Summer School begins at 8 a.m. on Tuesday, July 5, 1949, and closes on Wednesday, August 17.

Students are expected to register on Monday, July 4. An extra fee of \$3 will be charged those registering after this date.

Courses are given in Art, Biology, Chemistry, Drama, Economics, English, French, Geology, Geography, German, History, Latin, Mathematics, Music, Philosophy, Physics, Psychology, and Spanish. Libraries and laboratories are available for use as in the winter session.

Ban Righ Hall, the women's residence, is open during the summer and accommodates one hundred and forty students. Applications for rooms should be sent as early as possible to the Dean of Women.

Purpose of the Summer School

The Summer School offers the advantages of university study to those who cannot attend the classes of the regular session.

It gives teachers an opportunity to improve their scholarship in chosen lines of study, to observe methods of teaching, and to become acquainted with books and equipment not otherwise available.

It gives intramural students who have lost standing through illness or other causes an opportunity of qualifying for the September supplemental examinations. Moreover, intramural students in their first or second years, who on account of ill health are unable to carry the required five courses, may, with the consent of the Board of Studies, take three or four courses in the winter and the rest extramurally in the summer, provided that they attend the Summer School.

It gives extramural students an opportunity to take the oral work required in the modern languages, to do in the laboratories the practical work required in the courses in Science and to satisfy the minimum residence requirements for the degree of Bachelor of Arts. See section 9 under REGULATIONS REGARDING EXTRAMURAL WORK.)

Admission

No examination is required for admission to the Summer School. The classes are open to all who desire to improve their scholarship or professional equipment. Candidates for a degree, however, must satisfy matriculation requirements before being admitted to the University work and examinations, and must register for summer work in April. Furthermore, they must submit in May and June at least seven-eighths

of the exercises and all the essays in those classes which require such work.

No student working for credit is allowed to register for more than two courses or three half-courses in the Summer School.

Examinations

No examinations are held in connection with the Summer School. Students desiring credit for their work should write at the regular University examinations in September. See sections 11, 18, 21, 22 under REGULATIONS REGARDING EXTRAMURAL WORK.

Fees

See FEES (below).

Further Information

The Announcement of the Summer School, containing full details concerning the work offered, is published each year in March, and is supplied on application.

All inquiries concerning the Summer School should be addressed to the Department of University Extension, Queen's University, Kingston, Ontario.

FEES

Students who enter with Grade XIII (*Senior Matriculation*) standing or its equivalent and proceed to the Honours degree, shall pay in aggregate not less than the full sessional fees for four years. Pass students who enter with the above standing shall pay in aggregate, not less than the full sessional fees for three years.

Fees must be remitted by accepted cheque, postal order, or bank draft, payable to Queen's University. Cheques or bank drafts on any point where there is a branch of the Bank of Montreal are received at par; all other cheques should have $\frac{1}{8}$ of 1%, minimum 15c, added to cover exchange, or be drawn plus exchange.

INTRAMURAL

Fees are payable each year upon registration.

A student is not registered and may not attend classes until he has paid the required fees.

Sessional Fee—including Registration, Tuition, Library, Examinations\$200 00

Student Interests—including Health Insurance, Union, Faculty Societies, Alma Mater, Journal, and Athletics (the athletic fee which is part of student interests gives admission to all home games except playoffs)\$30 50

Fees may be paid in two instalments, in which case an additional \$5 is added to the first instalment. The first instalment and the laboratory fee must be paid at the time of registration in September, the balance on or before January 5th, 1950. No student is admitted to classes until the above conditions have been complied with, nor is he permitted to continue the work of the second term until the fees have been paid in full.

YEAR FEES

A year fee, ordinarily not more than \$2.00 is collected by the year societies shortly after the opening of the session.

GRADUATE FEES

Candidates for the degree of Master of Arts must pay

Sessional fee	\$110 00
Student Interests fee	30 50
Library fee	10 00
Laboratory fee (payable by students taking laboratory work)	6 00

If the work for the Master's Course is spread over two years, the student pays each year a total sessional fee of \$100.50. In addition, a \$6.00 laboratory fee (\$12.00 in the case of Chemistry) is payable if the student is taking science.

The fees specified below are payable as they are incurred.

Laboratory Fee:

A fee is charged for all courses in Science:

Without Chemistry	\$ 3 00
With one course in Chemistry	6 00
With two or more courses in Chemistry	12 00

Special Charges:

Entrance fee (payable by students registering for the first time)	5 00
<i>Pro tanto</i> allowance on work done in another University	5 00
Late registration (see also note, page 5), minimum	3 00
Change of courses after registration	2 00
Fee for a Reading Course taken in year in which the student is not registered for other work	36 00

FEES

Fee for a single course, seminar or lecture, taken above the normal number of five courses	50 00
Late application—for examination or graduation	3 00
Special examinations given at the University when a regular examination is missed:	
One examination	5 00
Two or more examinations	10 00
Examinations at outside centres:	
Each whole course	6 00
Each half-course	3 00
Supplemental examinations:	
Each whole course	6 00
Each half-course	3 00

Special students not paying full fees:

Each course taken	50 00
(Student interests and Laboratory fees as above)	

Graduation:

Bachelor of Arts	10 00
Bachelor of Commerce	10 00
Bachelor of Nursing Science	10 00
Master of Arts	20 00
Master of Commerce	20 00
Doctor of Philosophy	50 00
Doctor of Science	50 00
Extra fee for degree <i>in absentia</i>	10 00

EXTRAMURAL

Extramural and Summer School Fee—(This is an inclusive fee covering Registration, Tutorial work, Summer School, Examinations (except supplementals), Library, Health Insurance, the MacClement Scholarship contribution and membership in the Summer School Association.)

Each whole course taken extramurally or by extramural and Summer School work	\$36 00
Each half course	18 00

Special charges

Entrance fee (payable by students registering for the first time)	5 00
Fee for <i>pro tanto</i> allowance on work done in another University	5 00
Laboratory fee for Physics, Chemistry, Biology, Geography	3 00

SCHOLARSHIPS, PRIZES, AND MEDALS 65

Fee for late registration and examination	3 00
Change of work after registration	2 00
Registration fee (payable only by non-registered students applying for examinations in courses already passed)	10 00
Establishment of new examination centre	10 00

Fee for supplemental examinations

Each whole course	6 00
Each half course	3 00
Fee for late application	3 00

Graduation

The fees are outlined on page 64, under *Graduation*.

Fees may be paid in two equal instalments, in which case an additional \$1 will be added to the first instalment. Students registering in September must pay the first instalment by September 17, the balance on or before December 1. Students registering in April must pay the first instalment by April 10, the balance on or before July 2.

SCHOLARSHIPS, PRIZES, AND MEDALS

I—MATRICULATION SCHOLARSHIPS

For a list of Matriculation Scholarships and the conditions of award see the publication entitled SCHOLARSHIPS AND PRIZES.

II—SCHOLARSHIPS IN ARTS

Scholarship awards are governed by the following regulations:

1. Scholarships may be held only by students in the Faculty of Arts in attendance the year following the award.
2. Scholarships are not ordinarily awarded to students who make lower than first class standing.
3. A student may not hold more than \$400 in Faculty scholarship money in any one year.
4. In any year in which a scholarship can not be given under the normal terms of award, the Department concerned may make a special recommendation to the Faculty.

SCHOLARSHIPS, PRIZES, AND MEDALS
LANGUAGE AND LITERATURE

DEPARTMENT OF CLASSICS

Frederica McCulloch Scholarships in Latin

Founded by the late Andrew McCulloch, M.A., of Thorold.

1. Value \$60: awarded to the student who has the highest standing on the April examination in Latin 1.
2. Value \$80: awarded to the student who has the highest standing on the April examination in Latin 2.
3. Value \$60: awarded to the student who has the second highest standing on the April examination in Latin 2.
4. Value \$120: normally awarded at the end of the first year of Honours on the standing obtained thus far in Latin courses taken at the University.
5. Value \$80: normally awarded at the end of the first year of Honours on the standing obtained thus far in Latin courses taken at the University.

W. W. Near Scholarships in Classics

Founded by the late W. W. Near, Esq., of Toronto.

1. Value \$100: normally awarded at the end of the second year of Honours, chiefly on the standing obtained in courses of the Department of Classics. When candidates are of nearly equal merit, some preference will be given those who are taking Greek.*
2. Value \$50: awarded to the student who has the highest standing on the April examination in Greek and Roman History 4.
3. Value \$50: awarded to the student who has the highest standing on the April examination in Classical Literature 1.

Scholarships in Greek

The Maclellan Scholarship, founded by the late Hon. James Maclellan, LL.D. of Toronto; value \$20.

The Flossie May Bogart Scholarship, founded by the late Mrs. I. G. Bogart of Kingston in honour of Flossie May Bogart; value \$80.

*Note: These scholarships are intended to recognize outstanding promise in Honours work. If conditions warrant, they may be awarded at other stages than those prescribed here.

These awards are made to students of outstanding ability and promise in Greek A or 1 or 2. When Greek A and 1 are taken in the winter and the following summer they will (for purposes of these awards) be considered as together forming one course. It will therefore sometimes be necessary to withhold announcement of these Scholarships until the results of September examinations are known.

DEPARTMENT OF ENGLISH

Alexander Laird Scholarship in English 1

Value \$50. Founded in memory of the late Rev. Alexander Laird by his brothers and sisters and awarded annually to the student who makes the highest marks in English 1.

The James Cappon Memorial Scholarship in English 2

Founded by Miss Alice L. Macnee of Kingston in memory of Dr. James Cappon, formerly Head of the Department of English and Dean of the Faculty of Arts.

Value \$40: awarded to the student making the highest standing in English 2, provided that the student proceeds to further work in English the following year.

Special Scholarship for Highest Standing in Extramural English 2

Value \$25. Given by a graduate to the extramural candidate for degree who makes the highest standing in English 2, provided that the candidate proceeds with University work the following year. This Scholarship is paid in two equal instalments on or about October 15 and March 15.

Roberta McCulloch Scholarships in English

Founded by the late Andrew McCulloch, M.A., of Thorold.

1. Value \$30: awarded annually to the student standing second in English 2 (intramural).

2. Value \$50: awarded annually to the student standing highest in Grade A, English 5.

3. Value \$50: awarded annually to the student standing highest in Grade A, English 7.

4. Value \$20: awarded to the Honours student having the highest standing in English 10.

5. Value \$20: awarded annually to the Honours student standing second in English 10.

6. Value \$100: awarded annually to the Honours student who, having English as the Major subject, stands highest in Grade A, in the final year examinations, provided that the student is proceeding to graduate work in Queen's University or another University.

McIver Scholarships

Founded by J. B. McIver, formerly Treasurer of Queen's University.

1. Value \$50: awarded to the student having the highest standing in English 14.

2. Value \$50: awarded to the student having the highest standing in English 15.

3. Value \$50: awarded to the student having the highest standing in English 19.

4. Value \$50: awarded to the student having the highest standing in English 20.

The '01 Fellowship in English

Value \$80. Established by the class which graduated in 1901. Awarded to a student who will act as tutor in English during the following session.

Arts '15 Scholarship

(The capital sum is not yet fully collected.)

Present value \$26. Founded as a memorial by the class of 1915. Awarded annually in turn by the Departments of English, Mathematics and History to the student with highest standing in two Honours courses taken in the third year. Awarded in English in 1950, in Mathematics in 1951 and in History in 1952.

McIlquham Foundation in English

Value \$20. Founded by the parents of Mr. J. Max McIlquham, a student at Queen's University, 1912-15, who was killed on service overseas. Awarded for the best original poem, short story, or play.

Competitive papers must be submitted to the Registrar by April 1.

Each paper must bear a motto instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a signed declaration that it is his unaided composition.

All successful compositions are the property of the University, and are at the disposal of the Senate.

Wilhelmina Gordon Foundation in English

Established by the Imperial Order, Daughters of the Empire, in appreciation of the work of Professor Wilhelmina Gordon, who served as National Educational Secretary from 1923 to 1937.

Value \$25: awarded to the Honours student in English standing highest in Class I in the final year examinations, provided that the student is proceeding to graduate work at Queen's University.

DEPARTMENT OF FRENCH

W. W. Near Scholarships in French

Founded by the late W. W. Near, Esq., of Toronto.

1. Value \$100: awarded to the student who has the highest standing in French 2.

2. Value \$100: awarded to the student making the highest standing in the first year of Honours work.

The Ottawa B'nai B'rith Scholarship in French

Value \$100: awarded to the student making the highest standing in the second year of Honours work in French.

Sir Wilfrid Laurier Memorial Scholarship

Value \$80. Founded by the Ontario Women's Liberal Association to perpetuate the memory of Sir Wilfrid Laurier. Awarded for proficiency in French conversation. Candidates must be Canadian-born English-speaking students, sons or daughters of a British subject by birth or naturalization, not of French parentage and resident in Ontario. The examination is held in March of each year.

See also the Edgar Forrester Scholarship in Oral French, \$20, page 93.

DEPARTMENT OF GERMAN

W. W. Near Scholarship in German

Founded by the late W. W. Near, Esq., of Toronto.

1. Value \$50. Awarded to the student who obtains the highest standing in German 2.

2. Value \$50. Awarded to the student who obtains the highest standing in German 10.

Susan Near Scholarship in German

Founded by the late Susan Near of Toronto.

Value \$50. Awarded to the student who obtains the highest standing in any full course, or two half courses, in Honours German other than German 10.

In any year in which one or more of these scholarships cannot be awarded under the foregoing conditions, the Department may make a special recommendation to the Faculty.

DEPARTMENT OF HEBREW

Mary Fraser McLennan Prize in Hebrew

Value \$12. Founded in memory of Mary Fraser McLennan, of Lancaster, by her sons. Awarded to the student obtaining the highest standing in Hebrew 1, provided he intends to pursue a Theological Course in Queen's Theological College.

DEPARTMENT OF SPANISH

W. W. Near Scholarships in Spanish

Founded by the late W. W. Near, Esq., of Toronto.

1. Value \$50: awarded to the student who has the highest standing in Spanish 1.

2. Value \$50: awarded to the student who has the highest standing in Spanish 10 or 6.

Susan Near Scholarship in Spanish

Founded by the late Susan Near of Toronto.

Value \$50: awarded to the student who has the highest standing in Spanish 2 provided that that standing is Class I.

HISTORY AND SOCIAL SCIENCE

DEPARTMENT OF HISTORY

Andrew Haydon Scholarship in Colonial History

Value \$40. Founded by Senator Andrew Haydon, M.A., '93, LL.B. Awarded to the student with the highest standing in the Pass class in Canadian History (History 3).

Susan Near Scholarships in History

Founded by the late Susan Near of Toronto.

Two scholarships of the value of \$80 and \$70 respectively. Awarded to the students who, offering History as their Major subject, obtain the highest and the second highest standing in History at the end of the first session after admission to Honours.

Arts '09 Scholarship in History

Present value \$75. Founded by the class of 1909. Awarded annually to the Honours student in History with the highest standing in History courses taken in the penultimate year.

DEPARTMENTS OF PHILOSOPHY AND PSYCHOLOGY

Susan Near Scholarship in Philosophy

Founded by the late Susan Near of Toronto.

Value \$100: awarded to the student taking the highest standing in Psychology 2.

Isaac Cohen Scholarship in Philosophy

Value \$100. This Scholarship is awarded annually to a student in Philosophy on the results of the year's work in Philosophy 1.

DEPARTMENT OF POLITICAL AND ECONOMIC SCIENCE

W. M. O. Lohead Scholarship in Economics

Value \$40. Founded by W. M. O. Lohead, M.A., '98, Kitchener, Ontario. The Scholarship will be awarded to the student taking the highest standing in the sessional examinations and classwork in Economics 4, provided he is in attendance in some faculty of the University during the following session.

Adam Shortt Scholarship in Political Science

Value \$40. Founded by G. W. Mason, Esq., K.C., in honour of Dr. Adam Shortt, formerly Professor of Economics. Awarded to the student taking the highest standing in Politics 2, provided he is in attendance during the following session and is registered in advanced work in the Department of Political and Economic Science.

W. W. Near Scholarship in Political and Economic Science

Founded by the late W. W. Near, Esq., of Toronto.

Value \$200: awarded by recommendation of the Department on the basis of the first year's work in Honours in the Department (i.e., the first year after admission to Honours) to a candidate for Honours (Major) in Economics or Politics. The holder of the scholarship is paid \$100 in each of two succeeding years. The second payment may be withheld, on recommendation of the Department, if the holder's progress is not satisfactory.

George and Mary Louise Patton Memorial Scholarship

Value \$80. Founded by the late George Patton in memory of his wife, Mary Louise Patton, and himself. Awarded by recommendation of the Department of Political and Economic Science on the basis of the first year's work in honours in the department, that is the first year after admission to honours, to the candidate for honours in Economics or Politics who makes the second highest standing.

Gowan Foundation No. I

Value \$20. Founded by the late Sir James R. Gowan, K.C.M.G. Awarded for the best essay written under examination conditions in February of each year, on one of a list of subjects prescribed by the Department of Political and Economic Science.

Gowan Foundation No. III

Value \$20 in books. Founded by the late Sir James R. Gowan, K.C.M.G. Awarded in Honours in Political Science.

The Clarkson Prize in Accounting

Value \$50. The gift of Clarkson, Gordon and Company. Awarded on the recommendation of the staff of the School of Commerce and Administration to the graduating student who has taken the optional courses in the accounting field and whose work on these courses and on the compulsory courses in the same field has been outstanding.

Arthur Hillmer Memorial Prize

A Prize of the value of approximately \$10 in books. Established and maintained by Cameron C. Hillmer, Commerce '36, Oakville, Ontario. Awarded annually at the Spring Convocation to the final year student who, in the opinion of the Commerce staff, has done the best work in Commerce 52 (Principles of Marketing).

C. F. J. Finlay Memorial Prize

A Prize of the value of approximately \$10 in books. Established and maintained by Cameron C. Hillmer, Commerce '36, Oakville, Ontario. Awarded annually at the Spring Convocation to the final year student who, in the opinion of the Commerce staff, has done the best work in Commerce 54 (Business Finance).

Edwin Waterhouse Scholarship

Value \$250. Founded by Price, Waterhouse and Company.

Awarded to a student in the Course in Commerce and Administration who has completed the work of the second year, is within one year of graduation, has gained distinction in his academic work and is deserving of financial assistance. The award is conditional on the winner taking the optional accounting courses of the final year. If he fails to register for these courses at the beginning of the session following the award, the next most deserving candidate who satisfies all the conditions is given the scholarship.

The recipient is selected on the recommendation of a Committee of Award consisting of the Principal of the University, the Director of the School of Commerce and Administration, and the Registrar.

DEPARTMENT OF INDUSTRIAL RELATIONS

Bryce M. Stewart Prize in Industrial Relations

Value \$25. Given by Bryce M. Stewart, M.A., Ph.D. A prize of the value of \$25 to be awarded each year to the student making the highest standing in Commerce 51b (Personnel Administration).

The Clarence J. Hicks Fellowship in Industrial Relations

Value \$600, tenable at Queen's University. Founded by friends and admirers of the late Clarence J. Hicks, Chairman of the Board of Trustees of Industrial Relations Counselors, Inc., New York City, and pioneer in the field of Industrial Relations, through whose leadership and assistance the Department of Industrial Relations was established at Queen's in 1937.

The fellowship is awarded annually. If in any year no qualified candidate is available, the income for that year will be accumulated for the purpose of granting an additional or larger fellowship in subsequent years.

The fellowship is available for study of, or research work in, industrial relations to graduates of Canadian universities who are nominated, within not more than five years after graduation (exclusive of any period of active service in His Majesty's Armed Forces or in the armed forces of any ally of the Dominion of Canada), by the Head of the Department of Industrial Relations of Queen's University. Graduate work in Industrial Relations requires as a prerequisite specialized undergraduate work in economics or commerce.

The award will be made on the basis of intellectual achievement, personality, participation in student activities, standing among fellow-students, and promise of success in industrial relations work. Need for financial assistance shall be taken into account only as between candidates otherwise of equal merit.

MATHEMATICS AND SCIENCE

DEPARTMENTS OF MATHEMATICS AND PHYSICS

N. F. Dupuis Scholarship in Mathematics

Value \$50. This is one of three scholarships founded by the graduates of the University in honour of the late Professor N. F. Dupuis on the completion of his forty-five years' service as Professor in the University. The scholarship is awarded to the student who takes the highest standing in Mathematics 1 in the April examinations.

E. D. Merkley Prize in Mathematics 2

A prize of the value of \$5 in books. Founded in memory of E. D. Merkley, B.A., a graduate of 1926. Awarded each year to the student obtaining the highest standing in Mathematics 2.

Susan Near Scholarships in Mathematics

Founded by the late Susan Near of Toronto.

Two Scholarships of the value of \$60 and \$40: awarded to the students with the highest and the second highest standing in Mathematics 2, 10a, 11b taken concurrently.

Two Scholarships of the value of \$60 and \$40: awarded to the students with the highest and the second highest standing in Mathematics 12a, 14a, 15b, 16b taken concurrently.

William Coombs Baker Memorial Prize

A prize of the value of about \$22 in books selected from a list approved by the Department of Physics. This prize has been founded by graduates in memory of William Coombs Baker, formerly the Robert Waddell Professor of Experimental Physics at Queen's University. Awarded annually to the student making the highest standing in Physics 11.

Day Scholarship in Physics and Mathematics

Value \$20. Founded in memory of the late Calvin Wellington Day, M.A., Lieutenant 2nd Battalion, C.E.F. Awarded to students proceeding to the Honours Course in Physics and Mathematics, the award to be based on examinations in Physics 2 and the Mathematics taken in the same year, provided that at least one full course in Mathematics other than Mathematics 1 is being taken.

Susan Near Scholarships in Physics

Founded by the late Susan Near of Toronto.

1. Value \$50: awarded to the student who has the highest standing in Physics 2 and 11 at the end of the session in which course 11 is completed. It is not necessary that Physics 2 should be taken concurrently with Physics 11.

2. Value \$75: awarded to the student who has the highest standing in Physics 14a and 13b taken concurrently.

3. Value \$75: awarded to the student who has the highest standing in Physics 12a and 10b taken concurrently.

DEPARTMENT OF BIOLOGY**W. T. MacClement Memorial Prize in Biology 1**

Value \$40. Given by graduates in memory of William Thomas MacClement, formerly the John Roberts Allan Professor of Biology at Queen's University. Awarded annually to the student making the highest standing in Biology 1.

W. W. Near Scholarship in Biology

Founded by the late W. W. Near, Esq., of Toronto.

Value \$200: awarded by recommendation of the Department on the basis of the first year's work in Honours in the Department (i.e., the first year after admission to Honours) to a candidate for Honours (Major) in Biology. The holder of this scholarship is paid \$100

in each of two succeeding years. The second payment may be withheld, on recommendation of the Department, if the holder's progress is not satisfactory.

Gowan Foundation No. II

Value \$16. Founded by the late Sir James R. Gowan, K.C.M.G., for the best collection of Canadian Ferns and Fern Allies. In session 1949-50 only Canadian Ferns will be accepted. The plants must be good specimens, well pressed and mounted on herbarium sheets of the standard size. The collection must be delivered before December 15.

Ann Eliza Stafford Scholarship in Biology

Value \$40. This Scholarship is not yet available but will later be provided by T. T. Bower, Esq., of Winnipeg, at which time the conditions of award will be announced.

DEPARTMENT OF CHEMISTRY

William Moffat Scholarship

Value \$20. Founded by Dr. William Moffat of Utica and awarded annually to the student making the highest standing in first year Chemistry.

Dr. William H. Nichols Scholarship in Chemistry

Founded by Dr. William H. Nichols.

A scholarship of the value of \$40 awarded annually to the student obtaining the highest marks during the year in Chemistry 2.

Susan Near Scholarships in Chemistry

Founded by the late Susan Near of Toronto.

Two Scholarships of the value of \$100 and \$50 to be awarded to the students with the highest and second highest standing in any two of Chemistry 10, 12 and 13 taken concurrently, provided that the average obtained in each case on the two subjects is at least 75%.

Solomon Lieff Prize in Physical Chemistry

Value of \$10.47 in books. Established in memory of the late Solomon Lieff, Arts '46, by Mr. and Mrs. I. Lieff and the B'nai B'rith Hillel Foundation of Queen's University. Awarded annually to the student making the highest standing in Chemistry 14.

Chemical Institute of Canada Scholarships

Two scholarships of the value of \$25 each given by the Chemical Institute of Canada. One scholarship is awarded to the student in third year Chemical Engineering who obtains the highest standing on the work of the year and the other to the student either in third year Chemistry or in the penultimate year of the Honours Course in Chemistry in the Faculty of Arts who obtains the highest standing on the work of his year.

DEPARTMENTS OF GEOLOGY AND MINERALOGY**Manley B. Baker Scholarships in Geology**

Founded by Agnes Moreland Baker. Two Scholarships of the value of \$125 and \$75 are awarded annually to the students in the Faculty of Arts or of Applied Science obtaining highest and second highest standing in the first three courses in Geology or two in Geology and Mineralogy I. These may include alternately Mineralogy 10a (Arts) or Mineralogy III (Science). If two students are equal, preference will be given to the one whose need is greater.

Susan Near Scholarship in Geology-Mineralogy

Founded by the late Susan Near of Toronto.

Value \$100: awarded to the student making the highest standing in Mineralogy 10a, Mineralogy 11, Geology 10b, Geology 11.

GENERAL SCHOLARSHIPS**University Scholarships**

Six scholarships of the value of \$100 and eight of the value of \$75 are awarded at the close of each session to students completing first, second and third year work. (One of the \$100 scholarships is maintained by the class of 1940 and has been dedicated to one of their class members, Sidney Watson, who was killed on active service on April 3, 1941; one of the \$75 scholarships is maintained by the class of 1939).

The Toronto Branch of the General Alumni Association Scholarship

Value \$100. Given by the Toronto Branch of the General Alumni Association for a period of five years. Awarded under the same conditions as the University Scholarships.

Reuben Wells Leonard Penultimate Year Scholarships

One Scholarship of the value of \$300 and one of the value of \$200. Awarded at the end of the penultimate year to the students obtaining highest and second highest standing in the Faculty of Arts. The winning students must be in residence the year following the award.

American Legion Scholarship

Value \$100. Established by Dr. George Hayunga of New York. To be awarded annually to an officer cadet of the Contingent. The selection will be made by the Joint Services University Training Committee from a group recommended by the Commanding Officer. In determining the award academic standing will be taken into consideration. (If the winning student is in his final year the scholarship will be awarded as a prize.)

Andrina McCulloch Scholarships for Public Speaking

These scholarships, to a value of \$400, are awarded annually for the promotion and encouragement of public speaking in the University. They are awarded in the following subjects:—

Drama

Two scholarships are awarded as a result of an audience poll at the two main productions of the Queen's Drama Guild.

Public Speaking

Scholarships are awarded as a result of a public speaking competition held in January. All members of the Science Public Speaking Forum and the Public Speaking Club, who have attended at least five meetings of their club, are eligible to compete.

One scholarship will also be awarded to the best speaker of the session in the Model Parliament at the discretion of the Speaker.

Reading

Scholarships are awarded for the best readers in open competition. All students are eligible to enter for this.

Debating

A separate panel of judges award scholarships from the Andrina McCulloch fund to the best speakers at the Debating Union's Medal Debate.

Presentation of Thesis Material

All graduate students are invited to deliver a ten-minute talk on their thesis project to a panel of judges drawn from the Committee on Graduate Studies. Two awards are made for the most lucid speakers.

Entry forms for these competitions are available from the Registrar's Office and applicants must return their form, completed, by December 15th, 1949.

B'nai B'rith Kingston, Bursary

Value \$50. Founded by the B'nai B'rith Lodge of Kingston. This Bursary is awarded annually to a student of promising ability but straitened circumstances. The award is made on the basis of the April examinations. Applications are received up until April 1 of each year.

C.O.T.C. Scholarship

Value \$100. Maintained by the regimental funds of the Queen's University Contingent of the Canadian Officers' Training Corps. To be awarded annually to an officer cadet of the Contingent. The selection will be made by the Joint Services University Training Committee from a group recommended by the Commanding Officer. In determining the award academic standing will be taken into consideration. (If the winning student is in his final year the scholarship will be awarded as a prize.)

Pipe Band Scholarship

Value \$25. Maintained by the Queen's University Pipe Band. Awarded annually to the best piper among the first year students in all faculties on the basis of a piping contest.

Robert Bruce Scholarships

Under provisions in the will of the late Robert Bruce of Quebec the University has established a Scholarship worth about \$70 in each of the Faculties of Arts, Applied Science and Medicine.

The Scholarship in each Faculty is awarded at the end of the first year to the student who has the highest standing on the regular examinations of that year. One-third of the value of each Scholarship is paid to the winner in each of the second, third, and fourth years of his Course provided that he is in attendance in the Faculty in which the award was made.

Robert Bruce Bursaries

The will of the late Robert Bruce of Quebec provided for a sum of about \$90 a year to be given in Bursaries "to students of promising ability but straitened circumstances."

This sum is disbursed annually to one or more students in the third or later years in any Faculty. The Registrar will receive applications up to September 1 in each year.

Khaki University and Y.M.C.A. Memorial Fund

This fund is part of a sum, left from the Khaki University after the Great War, which was divided among the Canadian Universities.

The interest, amounting to \$240, is used to award one or more scholarships to undergraduate students in any Faculty. In awarding these scholarships the need as well as the standing of applicants is considered and preference is given to returned men, or sons or daughters of soldiers of the Great War. Applications are received by the Registrar up to April 1st.

University Women's Club of Kingston Bursary

Value \$150. Given annually by the University Women's Club of Kingston to assist a woman student of promising ability who is in financial difficulties. Interested candidates should make application to the Registrar by December 31.

The O. M. Montgomery Memorial Fund

Established by the Aluminum Company of Canada in memory of Mr. O. M. Montgomery who graduated from Queen's University in Electrical Engineering in 1905. This Fund is used to provide bursaries for worthy students in need of financial help. It is administered by a Committee consisting of the Principal, the Vice-Principal, the Registrar, and a representative of the Aluminum Company. Awards may be made in any Faculty, and may only be regarded as gifts at the discretion of the Committee when made to sons or daughters of employees of the Aluminum Company. Otherwise repayment is expected in one or both of the following ways:

(1) By service to the University if the beneficiary has time and is qualified for the work available. Such service shall be assistance in a department, or office, or library, or laboratory, or some other comparable employment.

(2) By return in cash of the sum granted, or of the part not worked out. In such case the award is regarded as a loan without interest, payable at some convenient time to be agreed upon.

Lorne Greene Fellowship in Radio Arts

This fellowship has been given by Lorne Greene, Arts 1937, to encourage students to enter the field of radio broadcasting. It is awarded annually to the graduating student in the Faculty of Arts who best qualifies for admission to the Academy of Radio Arts in Toronto. The winner of the fellowship receives free tuition at the Academy.

Social Engineering Prize

Value \$50. Founded by A. E. McRae of Ottawa. Awarded annually under the following conditions as stated by the donor.

The object of this prize is to promote on the part of the individual the practice of factually appraising his every act from the point of view of others concerned so that he may make it easiest for them to co-operate in achieving a desired objective. It is based on the idea that maximum social progress primarily demands of education the production in individuals of capacity to lead others in the doing of things which, in the long view, are for the continuing good of all. A keen sense of responsibility for the common good, as opposed to the mere temporary benefit of a particular agency, is essential in efficient social leadership.

It is to be presented annually to the student in attendance at Queen's University who, prior to the beginning of his or her graduating year has developed and exhibited the greatest capacity in leading the student body, or any portion of it, in accomplishing purposes which are considered good by the majority of the student body.

The recipient shall be selected by a committee consisting of the presidents of the faculty societies and the Levana Society and the Principal of the University or his nominee.

Welch Scholarship

Value \$100. Founded by Frederick Welch of Kingston. Awarded in the Faculty of Arts and open for competition only to the sons and daughters of non-commissioned officers and men who served overseas in the Great War, and of mechanics and labourers, which students shall at the time be bona fide residents of the City of Kingston, preference being given to the children of soldiers. Application for this Scholarship must be made to the Registrar not later than April 1 and must give evidence of eligibility in accordance with the terms of the will. The Scholarship is awarded on the basis of the April examinations.

Reuben Wells Leonard Special Scholarships

Special Reuben Wells Leonard Scholarships for merit and need are available for students of promising ability but straitened circumstances. The awards are made on a loan or service basis.

St. Andrews Exchange

An exchange between the University of St. Andrews in Scotland and Queen's University in Kingston is arranged each year. Under this arrangement the University of St. Andrews gives exemption from fees and room and board to a student appointed by Queen's University and in return Queen's University gives free tuition and provides board and lodging for a student from St. Andrews. In addition, Queen's University

gives a cash award of \$200 towards the travelling expenses of the student appointed to St. Andrews and the University of St. Andrews gives £50 to the student coming to Queen's.

Applications for the exchange scholarship should be submitted to the Registrar of Queen's University by March 1 of the year of award.

Exchange Plan for Undergraduates of Canadian Universities

The object of the Exchange Plan is to permit specially selected students to take a year of work at a university in another section of the country, provided that such students undertake to return the following year to their own university. Students accepted under the exchange plan will be permitted to take a full year's work at the desired university with exemption from tuition.

Applications for an Exchange Scholarship must be in the hands of the Registrar not later than March 1st.

III—GRADUATE FELLOWSHIPS

A—Arts Research Fellowships

The University awards two Fellowships of the value of \$500 and one or two of smaller value. These are open to men and women who have taken an Honours B.A. at Queen's or an equivalent degree elsewhere. At the discretion of the Committee one of the \$500 Fellowships may be awarded as a travelling fellowship, but with this exception the appointments are given only to those undertaking graduate studies at Queen's.

A student appointed to a travelling fellowship must submit and have approved a plan of study, and must present a report on his year's work within twelve months of his appointment.

A student appointed to a fellowship within Queen's may be required by the Committee in consultation with the Department concerned, to undertake work of any of the following kinds: (a) Independent investigation, (b) Assistance in research work carried on by the Department, (c) Tutorial assistance not to exceed six hours a week.

The holder of a fellowship may be required to report in lectures or in written form the results of any investigations carried on.

The holder of a fellowship is not permitted to do any tutorial work except such as may be required of him by the Department in which his special studies lie. In no case may tutorial work exceed six hours a week or entitle the Fellow to additional remuneration.

Applications must be sent to the Registrar, accompanied by evidence of eligibility, not later than April 1 of each year.

The fellowships are awarded only to candidates of distinction and promise.

Reuben Wells Leonard Travelling Fellowship

Value \$175. This Fellowship is awarded annually to a student intending to do postgraduate work at a University within the British Empire.

B—Fellowships in Chemistry

Milton Hersey Fellowship in Chemistry

This Fellowship, of the annual value of \$400, is endowed by Milton L. Hersey, M.Sc., LL.D., of Montreal. It is open to graduates of all universities and technical colleges.

The holder of this Fellowship shall carry on research work for the whole session and embody the results in a thesis. The research may take the form either of independent investigation or of assistance in an investigation carried on by some department. The Fellow may be required to undertake tutorial work not to exceed six hours a week.

Applications for Fellowships are received by the Registrar up to May 1. If no appointment is made by that date, further applications are received up to September 1.

William Neish Fellowship in Chemistry

This Fellowship of an annual value of \$400 has been endowed by Ada E. Neish and Laura Neish Black of Kingston. It is open to graduate students in Chemistry from Queen's or other Universities.

The holder of this Fellowship shall carry on research work at Queen's for the whole session under the direction of some member of the Department of Chemistry and shall embody the results in a thesis. The Fellow shall be required to give laboratory instruction or its equivalent not to exceed nine hours a week.

The C.I.L. Fellowship in Chemistry and Chemical Engineering

Value \$750. Founded by the Canadian Industries Limited for research in Chemistry or Chemical Engineering. This is a Resident Fellowship open to graduates of Queen's or other Universities. Applications are received by the Registrar up to April 1st.

Shell Oil Fellowship

The Shell Oil Company of Canada has established a Fellowship of the value of \$750 plus tuition for graduate work in Chemistry, Chemical Engineering, Mechanical Engineering, Geology, Physics, Geophysics.

Applications must be submitted by April 1st each year.

C—Scholarships in Geology

J. B. Tyrrell Scholarship in Economic Geology

Founded by J. B. Tyrrell, LL.D., of Toronto.

Value \$500. This Scholarship is awarded to a graduate student who is working in the field of Economic Geology.

Applications must be sent to the Registrar not later than April 1st of each year.

The Major James H. Rattray, M.C., Scholarship

Value \$100. Founded by Major James H. Rattray, M.C. Open to students in either the Faculty of Arts or the Faculty of Applied Science; ordinarily awarded on the basis of standing in Economic Geology (including Geology of Canada), a subject of the fourth year, and tenable by a student registered for graduate work in the following year. In any year in which the Scholarship cannot be so used, it may be awarded at the discretion of the Scholarship Committee either as a prize in the year of award or as a general proficiency scholarship at the end of the third year, and held by a student whose programme includes Economic Geology in the following year. In determining the award, the Scholarship Committee take into account aptitude as well as academic standing.

D—Fellowships in History

Sir James Aikins Fellowship in Canadian History

This Fellowship of the annual value of \$400, was created through the generosity of Sir James Aikins, K.C., LL.D., of Winnipeg, who gave an amount creating an annual revenue of \$200. This was supplemented by an equal sum contributed by Queen's University. It is awarded on the basis of distinguished work in the advanced Honours courses in Canadian History, or such other courses as the Professor of Canadian and Colonial History shall determine.

The Fellowship is tenable only by students who return to the University for further work in Canadian History and is subject to the

same conditions regarding tutorial work as the Arts Research Fellowships.

Western Ontario Graduates Fellowship in History

This Fellowship of the annual value of \$320 was created through the generous contribution by graduates of the University in western Ontario of an amount creating an annual revenue of \$160, which was supplemented by an equal sum contributed by Queen's University. It was established for the purpose of encouraging research in History and of providing junior assistants in the Department of History. It is awarded within the discretion of that Department to an advanced student of satisfactory academic standing in attendance at the University, and is subject to the same conditions regarding tutorial work as the Arts Research Fellowships.

E—Fellowship in Philosophy

George MacBeth Milligan Fellowship in Philosophy

This Fellowship, of the annual value of \$400, has been endowed by George MacBeth Milligan of Toronto. It is awarded to a graduate who is qualified to carry on independent research work in Philosophy or Psychology.

The Fellow appointed shall carry on research work at Queen's University for the whole session and shall embody the results in a thesis. Such research may take the form of assistance in an investigation. Tutorial or other help may be required, under the same conditions as for the Arts Research Fellowships.

The Fellowship may be awarded to a qualified graduate of another university.

F—Reuben Wells Leonard Fellowships

Under the will of the late Reuben Wells Leonard provision was made for the following Fellowships:

Four Fellowships of the value of \$500 to be awarded to graduates of Queen's University "who are willing and qualified to undertake independent research work in the interests of higher culture". These Fellowships are tenable only by students in attendance at Queen's.

Application must be made to the Registrar not later than April 1st.

G—Reuben Wells Leonard Fellowships

Fellowships of varying amounts will be available during session 1949-50 for Queen's graduates continuing their work at Queen's University. Application for these Fellowships must be received by April 1.

IV—FELLOWSHIPS NOT CONTROLLED BY THE UNIVERSITY

A—The Marty Memorial Scholarship

This scholarship in memory of Dr. Aletta Marty, valued at not less than \$1000, is offered by the Queen's University Alumnae Association. Any woman graduate of Queen's University with a Master's degree may hold this scholarship, which is ordinarily awarded for a year's graduate work overseas. A committee chosen by the Alumnae Association makes the award.

The scholarship may be awarded to the same woman for a second year. The committee is authorized to withhold the award in any year for financial or academic reasons.

Applications should reach the Registrar not later than January 1st each year. Candidates must have the Master's degree when they hold the scholarship but not necessarily when they apply for it. Further information may be obtained from the Registrar's Office.

This Scholarship has been awarded to the following graduates of Queen's University: 1937, Winifred (Rutledge) Peterson; 1938, Jeanne (LeCaine) Agnew; 1939, Elise M. Berry; 1940, Anne H. Sedgewick; 1941, Eleanor (Clarke) Hay; 1942, Joyce Hemlow; 1943, Kathleen Butcher; 1944, Ellen Thibaudeau; 1945, Reta E. Anderson; 1946, Claire (Curtis) Tanner; 1947, Barbara Rooke; 1948, honour to Audrey D. Freeman, award to Arliss Denyes; 1949, Pauline Jewett.

B—The Rhodes Scholarship

1. *General Regulations*:—A Rhodes Scholarship is tenable at the University of Oxford and may be held for three years. Since, however, the majority of Rhodes Scholars obtain standing which enables them to take a degree in two years, appointments are made for two years in the first instance, and a Rhodes Scholar who may wish to remain for a third year will be expected to present a definite plan of study for that period satisfactory to his College and to the Rhodes Trustees.

Rhodes Scholars may be allowed, if the conditions are approved by their own College and by the Oxford Secretary to the Rhodes Trustees, either to postpone their third year, returning to Oxford for it after a period of work in their own countries, or may spend their third year in postgraduate work at any university of Great Britain, and in special cases at any university on the continent of Europe, the overseas dominions, or in the United States, but not in the country of their origin.

The stipend of a Rhodes Scholar is fixed at £400 per year. At most Colleges, and for most men, this sum is not sufficient to meet a Rhodes

Scholar's necessary expenses for Term-time and Vacations, and Scholars who can afford to supplement it by £50 per year from their own resources will find it advantageous to do so.

2. Conditions of Eligibility:—A candidate to be eligible must:

1. Be a British subject, with at least five years' domicile in Canada, and unmarried. He must have passed his nineteenth year, but not have passed his twenty-fifth birthday on October 1st of the year *for* which he is elected.

2. Have reached such a stage in his course at one of the Universities in Canada that he will have completed at least two years at the university in question by October 1st of the year *for* which he is elected.

Candidates may apply either for the province in which they have their ordinary private domicile, home or residence, or for any province in which they have received at least two years of their college education before applying.

In that section of the Will in which he defined the general type of scholar he desired, Mr. Rhodes wrote as follows:

"My desire being that the students who shall be elected to the Scholarships shall not be merely bookworms, I direct that in the election of a student to a Scholarship regard shall be had to:

1. his literary and scholastic attainments;
2. His fondness for and success in manly outdoor sports such as cricket, football and the like;
3. his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness and fellowship, and
4. his exhibitions during school days of moral force of character and of instincts to lead and to take an interest in his schoolmates for those latter attributes will be likely in after life to guide him to esteem the performance of public duty his highest aim."

Full particulars may be obtained from D. R. Michener, 372 Bay St., Toronto, Secretary of the Selection Committee for the Province of Ontario. Two Scholarships may be awarded annually in the provinces of Quebec and Ontario if qualified candidates appear.

Each candidate for a Scholarship is required to make application to the Secretary of the Committee of Selection of the province in which he wishes to compete, not later than November 10th. Application forms may be obtained from the Registrar's Office.

The following graduates of Queen's University have been awarded Rhodes Scholarships:

1905, J. M. Macdonnell; 1906, A. G. Cameron; 1907, N. S. Macdonnell; 1911, S. Scott; 1912, H. S. Smith; 1914, A. G. Cumming; 1919, H. R. MacCallum; 1920, K. E. Taylor; 1922, A. D. Winspear; 1925, L. F. Kindle; 1926, D. A. Skelton; 1936, J. G. Davoud; 1937, G. M. Brown; 1938, G. P. Grant; 1941, G. S. Bowell, R. S. Rettie; 1946, F. G. Hooton; 1948, Michael Howarth.

This Scholarship is not controlled by the University.

C—Royal Society of Canada Fellowships

Ten annual fellowships to be known as the Royal Society of Canada Fellowships, each of \$1500, and open on equal terms to men and women, have been endowed through the generosity of the Carnegie Corporation. They are tenable at institutions of learning or research, save in exceptional circumstances outside of Canada, and are available for advanced research in Literature, History, Anthropology, Sociology, Political Economy, or allied subjects, in French or English; and in Mathematics, Chemistry, Physics, Geology, Biology, or subjects associated with any of these sciences.

An applicant for a Fellowship should be a graduate of a Canadian university or college, or should have received an equivalent training in a Canadian institution possessing adequate facilities in his particular subject, and, except in special cases, should have the Master's degree or its equivalent or, preferably, have completed one or more year's work beyond that degree.

Applications, addressed to "The Secretary, Royal Society of Canada Fellowships Board, Ottawa, Canada," should contain particulars of the candidate's age and place of birth, a full statement of his academic career, with copies of original papers and any other evidence of his ability or originality in his chosen field; also an indication of the particular work he proposes to undertake, at what institution, and under whose direction; and should be supported by recommendations from the head of the department of the institution in which the candidate has studied, and from the instructors under whom he has chiefly worked. All these papers should be in duplicate.

The following graduates of Queen's have held these Fellowships:

1932-33, Christine Rice; 1932-33, H. W. Fairbairn; 1933-34, G. A. Harcourt; 1934-35, D. C. G. MacKay; 1936-37, W. C. Güssow; 1937-38,

A. W. Currie; 1938-39, J. S. Marshall; 1941-42, J. Dingwall; 1942-43, J. L. Evans; 1948-49, Audrey Freeman and Barbara Rooke.

This Fellowship is not controlled by the University.

D—Exhibition of 1851 Science Research Scholarships

This postgraduate scholarship of the annual value of £350 was founded by Her Majesty's Commissioners for the Exhibition of 1851, and is awarded to students who have given evidence of capacity for original research, and, except in very special circumstances, are under 26 years of age.

A given number of Scholarships are awarded annually to students in Canada recommended by the Universities approved by the Commission.

The nominee must be a British subject, must have been a *bona fide* student of Science for three years, must have been a student of this University for a full year immediately before his nomination, must be a student of this University at the time of his nomination (or he must have been a student at this University for a full year ending within twelve months prior to his nomination and since ceasing to be such student must have been engaged solely in scientific study), and must pledge himself not to hold, without special permission from the Commissioners, any position of emolument while holding the scholarship. He is recommended to the Commissioners by the Senate of the University. The scholarship may be held for two years, if the report of the first year's work be satisfactory to the Commissioners, and in exceptional cases for a third year. In the absence of special circumstances, the scholar will not be permitted to conduct his investigations in the country in which he received his scientific education. The particular investigation the student proposes to pursue must be stated before a scholarship can be awarded.

The scholarship is payable quarterly in advance and a grant of £25 will be paid if a satisfactory final report is presented within three months of the expiration of the scholarship. If in the opinion of the Commissioners it is necessary a scholar will receive an additional annual allowance not exceeding £50, and in some cases the fare from his University will be partially paid.

Recommendations must be received at the office of the Commissioners on or before June 1.

The following Science Research scholars have been appointed from Queen's University:

1894, N. R. Carmichael; 1896, T. L. Walker; 1898, F. J. Pope; 1900, W. C. Baker; 1901, C. W. Dickson; 1904, C. W. Knight; 1905, F. H. McDougall; 1907, C. Laidlaw; 1909, N. L. Bowen; 1911, W. A. Bell; 1913, J. R. Tuttle; 1915, R. C. Cantelo; 1921, D. G. H. Wright; 1924, R. H. F. Manske; 1924, D. C. Rose; 1926, H. M. Cave; 1928, B. W. Sargent; 1931, E. H. Charlesworth; 1932, G. S. Farnham; 1932, W. J. Henderson; 1934, W. E. Bennett; 1935, J. S. Marshall; 1937, A. G. Ward; 1946, G. R. Lindsey.

E—Canadian Federation of University Women Scholarships

The Canadian Federation of University Women offer the following scholarships:

I. *Senior*: Value \$1,250, available for study or research work, open to any woman holding a degree from a Canadian University, who is not more than 35 years of age at the time of award. In general, preference will be given to those candidates who have completed one or more years of graduate study and have a definite course of study or research in view.

II. *Junior*: Value \$850, open to any woman holding a degree from a Canadian university, who is not more than 25 years of age at the time of award. Preference will be given to students who have studied in only one university and who desire to continue their studies in another.

III. *Professional*: Value \$700, available for study in a professional school, open to any woman holding a degree from a Canadian University, who is not more than 35 years of age at the time of the award.

The awards are based on evidence of character, intellectual achievement and promise of success in the subject to which the candidate is devoting herself.

The proposed place and plan of study or research must be approved by the Scholarship Committee. Applications and recommendations must be received not later than February 1st.

Application blanks and further information may be obtained from the Convener of the Scholarship Committee, Dr. Cecilia Krieger, University of Toronto, Toronto, Ontario. Applications and recommendations must be received not later than February 1st.

The following graduates of Queen's University have been awarded the Federation Scholarship:

1930-31, Mary White; 1935-36, Marie (Hearne) Creech; 1940-41, Jeanne (LeCaine) Agnew; 1941-42, Anne Sedgewick; 1943-44, Joyce Hemlow; 1944-45, Kathleen E. Butcher; 1946-47, Barbara M. St. G. Craig; 1947-48, honour to Barbara Rooke; 1948-49, Carol Hopkins.

F—Daughters of the Empire Post-graduate Fellowship (Overseas)

As part of a War Memorial, the Imperial Order Daughters of the Empire offers annually in each province in Canada a scholarship for one year's postgraduate study in Great Britain. The value of the scholarship is \$1500 a year.

The conditions under which these scholarships are awarded are as follows:

1. Candidates may be men or women. They must be British subjects with at least five years' residence in Canada, and unmarried. Each candidate must hold a degree from a recognized university or degree-granting college in Canada, and must have done or be doing postgraduate work.
2. In each province a Committee of Selection will award the scholarship. Other things being equal, preference will be given the returned man, his sister, brother, son or daughter. The Committee of Selection will consider not only academic attainments and promise, but also personal character and physical fitness.
3. Applications for this scholarship should be sent before October 15, 1949, to Mrs. L. L. Skuce, Provincial Educational Secretary, I.O.D.E., 168 Jackson St. West, Hamilton, Ontario, who will provide additional information about the scholarship.

The following graduates of Queen's University have been awarded Daughters of the Empire Overseas Scholarships:

1921-22, Watson Kirkconnell; 1923-24, Hartly Munro Thomas; 1936-37, Henry Stanley Ferns; 1938-39 and 1939-40, Thomas John Allan; 1948-49 and 1949-50, David McQueen.

V—PRIZES**Composers, Authors and Publishers Association of Canada Prizes in Music**

Annual awards of the value of \$100. Given by the Composers, Authors and Publishers Association of Canada to students making the highest standing in Music 1 or Music 2. At the discretion of the Department of Music the prize may be divided between Music 1 and Music 2.

The Alexander MacLachlan Peace Prize

The Alexander MacLachlan Peace Prize has been established by the MacLachlan family in memory of Alexander MacLachlan, former

President of International College, Smyrna, who throughout his life worked for a better understanding among nations.

Value \$30. Awarded annually to the student making the highest standing in History 27 (Contemporary Europe).

Prince of Wales Prize

A prize of the value of \$32 in books. Founded in 1860 by H.R.H. the Prince of Wales. Awarded to the graduating student in the Faculty of Arts who is adjudged to have the best academic record at Queen's.

The M. C. Cameron Prize in Gaelic

Value \$40. Founded by the late M. C. Cameron, M.P., Goderich. Awarded to the best Gaelic scholar, reader or speaker, provided that he does not take less than 50% of the total number of marks in the competitive examination. Application for examination should be submitted to the Registrar before January 15 in each year. Work prescribed: any 600 lines of Ossian's *Fingal*, or an equivalent amount of any other Gaelic literature selected by the candidate; Blackie's *Language and Literature of the Scottish Highlands*, Gaelic Grammar, translation at sight of Gaelic into English and English into Gaelic.

Bennett Pipe Band Prize

Established by Mr. P. A. Bennett of Kingston, Ontario. Three medals of gold, silver and bronze to be awarded each year to the three most proficient pipers of the Queen's University Pipe Band.

Senator Davies Poetry Prize

Value \$500. Given by Senator W. Rupert Davies of Kingston for a period of ten years. Awarded for the best English poem of not more than fifty lines.

Candidates must submit their poems by February 1st of the year of award. Three typewritten copies of each poem must be submitted. They must be enclosed in one envelope addressed to the Registrar and marked on the outside "Senator Davies Poetry Prize". The writer's name must not be given but each copy must bear a motto instead of the author's name. Another sealed envelope inscribed with the same motto should be included containing (a) the author's name and (b) a signed declaration that the poem is the author's own original unaided composition. A competitor may submit more than one but not more than three poems but if more than one is submitted each poem must be sent in enclosed in a different envelope with a different motto for each entry.

The subject for the competition in 1949-50 is "No Man Is an Island" quoted from John Donne's "Devotions Number XVII".

The competition is open to all resident undergraduates of the Faculty of Arts who are registered as full time students on February 1st of the year of award.

Whig-Standard Essay Prize

Value \$500. Given by Senator W. Rupert Davies of Kingston for a period of ten years. Awarded for the best English essay of not fewer than 3,000 or more than 5,000 words.

Candidates must submit their essays by February 1st of the year of award. Three typewritten copies of each essay must be sent in. They must be enclosed in one envelope addressed to the Registrar and marked on the outside "Whig-Standard Essay Prize". The writer's name must not be given but each copy must bear a motto instead of the author's name. Another sealed envelope inscribed with the same motto should be included containing (a) the author's name and (b) a signed declaration that the essay is his own original unaided composition.

The topic for the competition in 1949-50 is The "displaced person" becomes the "new Canadian". (The approach may be factual or imaginative or a combination of both.)

The competition is open to all resident undergraduates of the Faculty of Arts who are registered as full time students on February 1 of the year of award.

SUMMER SCHOOL PRIZES

Curtis Memorial Foundation

Value about \$56. Founded in memory of the late J. T. Curtis of Ottawa. Awarded in October to a graduate of that year (April or September), who has completed the degree Course by extramural and Summer School work. The award is made by a special committee on the basis of scholastic ability, interest in athletics, and service to the Summer School.

Edgar Forrester Scholarship in Oral French

Founded by the late Edgar Forrester, Esq.

Value \$20: awarded to the student making the highest standing on the Summer School examination in Oral French.

Matheson Prize

Founded by the Queen's University Summer School Association.

Value \$16. Awarded to the summer school student standing highest in the September examination in Mathematics 2. Founded by The Queen's University Summer School Association in honour of the late Dean John Matheson, one time Supervisor of extramural work and from 1939 to 1943 Director of the Summer School, an ardent believer in extension courses, friend and counsellor of many generations of students.

The W. T. MacClement Prizes

Founded by the Queen's University Summer School Association.

Four prizes of the value of \$16 each. The Queen's University Summer School Association has established in memory of Dr. W. T. MacClement, the first Director of the Summer School, four prizes to be awarded on the results of the September examinations in English 2, Philosophy 1, History 3 and Biology 1 to the Summer School students who stand first in these courses.

McNeill Prize

Value \$16. Awarded to the Summer School student standing highest in the Fall examination in the English pass course numbered beyond English 2. Founded by the Queen's University Summer School Association to honour Dr. W. E. McNeill, former Vice-Principal and Treasurer, a wise friend and counsellor to Summer School Executives.

VI—MEDALS

A medal is awarded annually by the University to the candidate in each major subject who has made the highest standing on the whole of his Honours work in that subject, provided such standing is Class 1.

GENERAL REGULATIONS

All enquiries regarding regulations should be addressed to the Registrar.

Changes in regulations become effective immediately.

SPECIAL STUDENTS

1. Special students are those who do not intend to proceed to a degree. Such students may be admitted on satisfying the Faculty of their ability to profit by the courses to which they seek admission.

2. Special students under twenty-one at the opening of the session are subject to all the regulations affecting regular students and to the following special regulations:—

(i) They are not granted admission for more than one session though they may be readmitted to a succeeding session on a new application.

(ii) They are not allowed any supplemental examination but are required to withdraw from the University immediately if they fail to satisfy the Faculty at the regular mid-year or April examinations.

(iii) Examinations passed by special students carry no credit towards Matriculation or towards a degree.

(iv) Attendance as a special student does not count as part of the attendance required for a degree.

3. Special students over twenty-one years of age at the opening of the session may by action of the Faculty be exempted from all regulations respecting attendance and work.

REGULATIONS REGARDING COURSES

Attendance and Exercises

4. *Attendance.* Students are expected to be present at all lectures and laboratory periods in their courses, and to hand in all essays and class exercises when due.

Deficiency in attendance. Students who have not yet obtained standing in at least five courses since their first registration, are subject to the following regulation:

If during the session they are absent from more than one-eighth of the class and laboratory periods in a course, they may not take the final examination in that course, and they are considered to have failed in

it. They are subject to the regulations regarding supplemental examinations as explained in Sections 8 and 9.

Students who exceed the limit of absences because of illness must submit certificates from the attending physician when asking for consideration by the Faculty.

A record of absences based on monthly reports from Instructors is kept at the office of the Dean of the Faculty.

5. The December and April marks are determined not merely on the results of examinations but also on the work of the whole term or session, including consideration of class tests, examinations, attendance, and progress.

6. The faculty may, at any time, either during the term or after the close of the term, require any student to withdraw whose conduct, attendance, work, or progress is deemed unsatisfactory.

Failures and Low Grades

Supplementals

7. (a) Students who fail in any course at the final examinations may write a supplemental examination in the following September provided that a supplemental examination is offered in that course (See section 21, page 99) and that the student has not lost his year (section 9).

(b) Students who fail in any course may not come up again for examination in that course (except for a supplemental examination as provided in section 7a) without re-registering in the course and repeating the full work.

8. Students who have obtained credit in any course may, to raise their standing, write the examination at any subsequent examination period not later than the third examination period after first passing it. Ex-servicemen and women affected adversely by this regulation may be given consideration by the Board of Studies who will recommend action to the Faculty of Arts.

Loss of Year

9. (a) Students who at the final examinations fail in more than two courses are considered to have lost their year and may not write supplemental examinations. Students, who at the beginning of the next academic year lack credit on more than one course or two half courses of the previous year's work, are considered to have lost their year.

(b) Students who have lost their year may retain credit only in those courses on which they have obtained at least Grade B standing.

Withdrawal

10. (a) Students who fail in four or five courses at the final examinations are required to withdraw from the Faculty of Arts.

(b) Students who twice lose a year are required to withdraw from the Faculty of Arts.

11. Students, who have been required to withdraw from the Faculty of Arts, may be re-admitted in some subsequent session only if they give convincing evidence that they can profit from University work.

12. Students, who are re-admitted under Section 11 and those who are admitted after being required to withdraw from another Faculty, are placed on probation until Christmas. Other students whose work has been unsatisfactory may be placed on probation until Christmas. Students on probation who fail on more than two examinations at the midyear are required to withdraw at that time.

Number of Courses in a Year

13. No student is allowed to take more than five lecture courses in the academic year except as provided below.

(a) Students are permitted to take by extramural or extramural and Summer School work one back course during the summer following a winter session in which they have passed in five courses. This regulation is not open to a student who has failed a year.

(b) Students lacking only six courses for degree may take these courses in the final regular winter session if the Dean of the Faculty approves.

14. Intramural students, unless excused for some special reason, must take five courses in each of the first and second years. In no case are such students allowed to take fewer than three courses in the first or second year. In exceptional circumstances, they may, with the consent of the Board of Studies, take three or four courses in the winter session and the rest in the summer, provided that they attend the Summer School.

15. Students, who without special permission drop a course, are considered to have failed in that course

GENERAL REGULATIONS

Preparatory Courses

16. Students with full Matriculation who desire to begin work in Greek, German or Spanish may count course A in one or more of these subjects towards a Pass degree. They may count course A in one only of these subjects as a free option towards an Honours degree.

Unmatriculated students who use an A course in a language to remove an entrance condition may not count this course as a credit towards a degree. (See Admission by Special Regulations, page 48.)

17. Courses A and 1 may not be substituted for courses 1 and 2 where the latter are definitely prescribed.

REGULATIONS REGARDING EXAMINATIONS

(See also Regulations 5 to 12)

Mid-Term Examinations

18. One hour examinations in regular class periods may be held by any instructor whenever he thinks advisable.

Mid-Year Examinations

19. Midwinter examinations in all whole courses are held during the last week before the Christmas holidays. In these courses credit not exceeding fifty per cent. of the final marks may be assigned to the work of the first term. The attention of students is called to Regulations 5 and 10. Final examinations in half-courses of the first term are held in January (see page 6).

April Examinations

20. Final examinations in all whole courses, half courses of the second term and reading courses are held in April. Intramural students are expected to take examinations in all the lecture courses in which they are registered in the second term. In special circumstances and on the recommendation of the professor concerned they may be given permission to postpone until September, examinations in courses numbered under 10. They may not postpone examinations in Honours courses.

Examinations in the first two Reading courses in all subjects are held in both April and September.

The attention of students is specially called to Regulations 5 and 10.

September Examinations

21. Supplemental examinations are held in September in all Pass courses and in the first course in Honours but no supplemental examinations are given beyond the first course in Honours in a Major or Minor subject for the Honours B.A. degree. September papers are set in all subjects offered at the Summer School and in Reading courses 1 and 2 for those who do this reading during the summer.

22. At the specified date (see pages 5 and 6) before the September examinations begin, all candidates must apply to the Registrar for permission to write on the courses in which they wish to be examined. The application must be on printed forms supplied for the purpose and must be accompanied by the proper fees. See FEES.

Special Examinations

23. Students who for any reason fail to take an examination on the appointed date may be required to take a special examination. The fee is five dollars for one special examination; ten dollars for two or more examinations.

Admission to Examinations

(See also Regulations 4, 20, 21)

24. Ordinarily students are not permitted to take examinations unless they have registered on the prescribed date within the academic year in which they present themselves, but graduates not in attendance, who wish to take examinations merely to raise their standing in courses already passed, may delay their registration until February 15.

(See Regulation 8, page 96.)

25. No candidate is admitted to the examination hall later than thirty minutes after the beginning of the examination.

26. No candidate is permitted to take any books or papers into the examination hall except by express direction of the examiner.

Determination of Standing

27. In determining a student's standing at a sessional examination the Departments take into account the entire class record. See Regulation 5.

28. Students are given credit for the full work of the year if they have passed each of five courses with at least 50%.

29. Examination papers of candidates failing by only a few marks are reread with care and there is little likelihood of the original mark being changed by a further rereading. Students who wish to have a paper reread by the instructor and an additional examiner must make application within two months of the examination and pay a fee of \$10. If as a result of a rereading a mark is raised to a pass, the fee is refunded in full to the student.

30. The following percentages are required for the various grades of Pass and Honours standing in all courses:

PASS STANDING

(Applying only to courses numbered under 10)

Grade A	75 per cent. and over.
Grade B	62-74 per cent.
Grade C	50-61 per cent.

HONOURS STANDING

(Applying to all courses numbered 10 or over and to Reading courses)

Grade A	75 per cent. and over.
Grade B	66-74 per cent.
Grade C	55-65 per cent.

A student who makes 62% on a course numbered 10 or over is allowed a B grade towards the Pass degree.

A student who makes 50% to 54% on any course numbered 10 or over is permitted to count this course towards the Pass degree. No credit is given towards an Honours degree.

COURSES OF STUDY LEADING TO THE DEGREE OF B.A.

GENERAL EXPLANATIONS

Pass and Honours Courses

The word "Course," when printed with an initial capital, is used to indicate a programme of work leading to a degree or certificate.

A candidate for the degree of Bachelor of Arts may take a Pass Course or an Honours Course. The latter requires greater specialization and higher standards in the work of the two main subjects. Details are given below under REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS.

Courses and Half-Courses

The word "course," printed with an initial small letter, indicates a unit of work occupying, as a rule, three hours a week throughout the session. A "half-course," on the other hand, usually occupies only one term, though occasionally it may run through the session.

Two half-courses are equivalent to a whole course, and when the amount of work to be done is defined in courses, it is to be understood that an equivalent in courses and half-courses may be offered.

Numbering of Courses and Half-Courses

Preparatory courses in the languages are designated by the letter A. (See GENERAL REGULATIONS). Other courses are numbered with Arabic numerals (Latin 1, Greek 2). Half-courses have in addition to the numeral the letter *a* or *b*, according as they are offered in the first or second term.

The fundamental courses in each subject are ordinarily numbered 1 and 2 (Philosophy 1 or 2, Economics 4) and must be taken by all proceeding to advanced work in the subject. Other courses numbered under 10 are for Pass students only. Courses numbered 10 and upward are Honours courses, though in most departments they are open to Pass students provided that prerequisites have been completed satisfactorily.

SYNOPSIS OF COURSES

The following Courses of Undergraduate Study are offered in the Faculty of Arts

Pass Courses leading to the degree of B.A.

COURSES LEADING TO THE DEGREE OF B.A.

Honours Courses leading to the degree of B.A. with Honours and admission to the course of study leading to the Interim High School Assistants' Certificate, Type A.

Course in Commerce and Administration.

Combined Course in Arts and Applied Science.

Combined Course in Commerce and Applied Science.

Combined Course in Arts and Theology.

Course in Nursing.

Combined Course in Arts and Physical and Health Education.

Candidates are subject to changes in Regulations or Courses made after their first registration unless in the judgment of the Board of Studies undue hardship is involved.

All enquiries regarding Regulations should be addressed to the Registrar.

REQUIREMENTS FOR THE PASS B.A. DEGREE

Candidates entering the Pass Course with Grade XIII standing in five subjects (see Entrance Requirements, p. 44) are required to take fifteen courses for the Pass degree. Those entering with only four subjects of Grade XIII must take sixteen courses.

Ex-servicemen and women entering on the special Junior Matriculation (Ontario Grade XII) approved by the National Conference of Canadian Universities (p. 47) shall offer a total of twenty courses which may include as many as five Senior Matriculation (Grade XIII) subjects for which they may have credit.

The Pass Course provides for distribution and concentration of work as follows:

A. Compulsory general courses, all of which must be done at the University:

- (1) English 2 to be taken in the first year.
- (2) Philosophy 1 to be taken in the first year.
- (3) One course in Psychology, History, Economics or Politics.
- (4) One language course in addition to English 2 (course numbered 1 or 2 depending on the entrance standing in the language chosen. For example, candidates entering with Grade XII standing in French or German take French 1 or German 1; those entering with Grade XIII French or German take French 2 or German 2).
- (5) One science.

- B. Concentration of work to the extent of three courses taken at the University in each of the three subjects chosen as the subjects of specialization.

Additional classes to make up the required total may be freely chosen subject to the regulation governing prerequisites from those listed under the heading "Details of Courses of Instruction".

Candidates must make a standing of Grade B in at least half their work at the University. In courses numbered 10 or over 62% counts as the equivalent of Grade B.

HONOURS COURSES LEADING TO THE DEGREE OF BACHELOR OF ARTS

There are several types of Honours Courses:

- (a) The Specialized Honours Course.
- (b) The General Honours Course (see page 104, Section III).
- (c) The Honours Course for students preparing for admission to the Ontario College of Education for teachers' certificates in English and French, English and Latin, Latin and French, French and German or Spanish (see page 107, Section III, Interim High School Assistant's Certificate, Type A).

I. Admission to Honours

(a) At the end of the first year candidates for Honours must make formal application to the Registrar. These applications are referred first to the departments concerned for recommendation, and then to the Committee of Departments for final action.

Candidates are admitted to an Honours Course if in their special subjects they have made at least 62% in the preceding pass class and at least 60% in the preceding class numbered 10 or over, and if their standing in other subjects is considered satisfactory. If pass courses from a second Department are prescribed as part of a Major group, the candidate must make Grade B in them; if advanced courses from another Department are approved the candidate must make Grade C but will be exempt from the regulations regarding standing in earlier work in that subject.

(b) At the end of each year each candidate's record is reviewed by the Committee of Departments to determine his fitness to proceed in Honours. All not doing satisfactory work are required to revert to a Pass Course.

II. General Plan of Specialized Honours Courses

The specialized Honours degree may be taken in the following departments: Biochemistry, Biology, Chemistry, Greek, Latin, English, French, Geology, German, History, Mathematics, Mineralogy, Philosophy, Physics, Political and Economic Science, Psychology and Spanish.

The programme is made up of eighteen courses from Grade XIII standing in five subjects, with a Major consisting of lecture and reading courses in the subject of the degree, a Minor made up of lecture courses in a related subject, and compulsory general courses. The requirements for each degree Course are outlined in detail under the departmental prescriptions.

III. General Plan for General Honours Course

The General Honours Course is intended for the student who does not plan to specialize to the extent required by the specialized Honours Course but who wishes to have a programme providing for advanced work in *three subjects of study*. The subjects are selected so as to give a unified whole. The requirements for degree are made up of nineteen courses from Grade XIII in five subjects (twenty courses from Grade XIII in four subjects) as follows:

- (a) Lecture courses in each of the three special subjects (see course requirement for each subject under the Departmental prescription).
- (b) One reading course in each of the three special subjects.
- (c) Compulsory general courses as required on the specialized Honours Course.
- (d) The candidate is required to take, in addition to course examinations, one general examination in each special subject.

The regulations applying to specialized Honours Courses apply also to the General Honours Course.

IV. Length of Course

The Course for the degree of B.A. with Honours normally covers four years from Grade XIII in five full subjects. Ordinarily candidates are not permitted to register in any academic year in more than five courses including Reading courses. It is possible, however, for candidates of exceptional ability to complete the Course in three years from Grade XIII by taking five regular lecture courses or the equivalent in hours in each of three years, and by doing the Reading courses in the penultimate and final years and in the intervening summer. Such candidates must have passed with Grade A standing in each special subject and an average of Grade A on the year's work preceding admission to Honours.

V. Final Year Examinations on the Honours Courses

In addition to the regular sessional examinations, candidates must write general examinations at the conclusion of their Course as follows:

- (i) Specialized Honours Course—two general examinations in the Major subject.
- (ii) General Honours Course—one general examination in each of the three special subjects.
- (iii) Course for students preparing for admission to the Ontario College of Education for teachers' certificates in English and French, English and Latin, Latin and French, French and German or Spanish—one general examination in each of the two special subjects.

VI. Classes in Honours

Degree standing is awarded on the basis of proficiency in advanced courses as follows: (a) on the Specialized Honours course, in the Major subject; (b) on the General Honours Course, in the three special subjects; (c) on the "Specialist" Course, in the two special subjects. Seventy-five per cent. is the standing for First Class Honours, sixty-six per cent. for Second Class, sixty per cent. for Third Class.

VII. Pass Degree on an Honours Course

Candidates who pass all their classes but fail to secure honours because they have made less than 60 per cent. in one or both of the major and minor are granted a pass degree if they make at least 50 per cent. in each of their subjects.

VIII. Honours Courses in Languages (Specialist)

The Honours Course for students preparing for admission to the Ontario College of Education for specialist work in English and French, English and Latin, Latin and French, French and German or Spanish is described on page 107, Section III, Teachers' Certificate.

SOCIAL WORK

Students who wish to proceed to Social Work after graduation should choose a programme of undergraduate courses which so far as possible includes Psychology, Sociology, Politics and Economics. Courses in Canadian and English History are also desirable. Directors of Canadian Schools of Social Work are willing to give advice to undergraduates wishing to plan a course acceptable to the Admissions Committees of their schools.

COURSE FOR THE DIPLOMA IN LABORATORY TECHNIQUE

Opportunities to work towards a Diploma in Laboratory Technique are provided for a limited number of students who complete the Honours degree in Biochemistry, or Chemistry, or Biology, or the Pass degree including Physics 1, and at least three courses in each of Chemistry and Biology to be selected from

Chemistry 2, 10, 3 or 13, 12, Biochemistry 16.

Biology 16, 26, Bacteriology 10.

Advanced courses may be taken only if the student has passed the prerequisite courses with the necessary standing. It is advisable for the student to take Clinical Microscopy as an extra subject. If possible this course should be fitted into the final year of the academic programme.

Candidates for the Diploma in Laboratory Technique must complete in addition to the required academic work for degree, a course in laboratory training including four months in each of Biochemistry, Bacteriology including Serology, and Pathology including Haematology and routine laboratory analysis.

Candidates may take the necessary laboratory training in twelve months after graduation or in the summers during the years in which they are registered on the degree programme. Under the latter plan the work may be done in three summers of four months each and may begin in the summer after the first year at the University if the candidate has sufficient background in the basic subjects. It should be noted that the candidate must have three courses in Chemistry before attempting the laboratory training in Biochemistry; Bacteriology 10 before taking the laboratory training in Bacteriology.

Candidates for the Diploma are required to take a general examination on the completion of their laboratory training.

The fee for the laboratory programme is \$50.

COURSES FOR TEACHERS' CERTIFICATES IN THE PROVINCE OF ONTARIO

I. Permanent First Class Certificate

Students holding the Interim First Class Certificate may satisfy the academic requirements for the Permanent Certificate by taking five University courses. Some of the classes which may be completed by extramural work are: English 2, Latin 2, History 3, Philosophy 1, Psychology 2, Economics 4, Politics 2, Mathematics 2. Classes in science

and modern languages must be taken in residence either during a regular winter session or by extramural and summer school work.

II. High School Teacher's Certificate

Under the regulations of the Ontario Department of Education a candidate for a High School Teacher's Certificate who holds a First or Second Class certificate and who has had experience in the Public, Separate or Continuation Schools of the Province may be partially relieved from attendance at the Ontario College of Education.

The academic standing for admission to the professional Course leading to the Interim High School Assistant's certificate, Type B, is the degree of Bachelor or Master of Arts, Bachelor or Master of Science, or Bachelor of Commerce, from a British University, based upon Courses approved by the Minister of Education.

III. Interim High School Assistant's Certificate, Type A

By an agreement between Queen's University and the Department of Education of Ontario, graduates of the Faculty of Arts in certain specified Honours Courses may be certified as having completed the academic requirements for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, at the Ontario College of Education.

The Department of Education has authorized Certificates as follows:

Classics	History
Latin and French	Mathematics
Latin and English	Mathematics and Physics
English	Science
English and French	B.Com. Course
French and German or Spanish	Physical and Health Education

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in Latin and French, Latin and English, English and French, French and German or Spanish take a degree programme made up of six lecture courses in each of the two special subjects, two reading courses in either subject, one reading course in the other subject, and general courses as specified under the Departmental prescriptions for Honours Courses. Students of exceptional linguistic ability may be permitted to take as many as three courses in a third language. In that case they substitute two courses in the third language for one reading course in each of the other two languages and they take one of their optional general subjects in the third language.

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in other combinations listed, take the regular Honours Courses as outlined under the Departmental Prescriptions.

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in Science may take the General Science Course for Teachers or the regular Honours Course in two of Physics, Chemistry, Biology with adjustments as noted under the Departmental Prescriptions.

IV. Commercial Specialist's Certificate

Students working with the Department of Education towards the Commercial Specialist's Certificate are granted exemption from attendance and examination in the following subjects if they pass the equivalent University courses with Grade A or B standing. They are given exemption from attendance only if they pass the courses with Grade C standing:

<i>Department of Education Courses</i>	<i>University Equivalent</i>
Arithmetic of Investment	Mathematics 7a
History of Commerce and Industry	Economics 4
Theory of Economics	Economics 10
Money and Banking	Economics 12
Business Law	Commerce 60
Bookkeeping	Commerce 63
Accountancy Theory	Commerce 64
Accountancy Practice	Commerce 67b

Note: Theory of Economics is equivalent to Economics 1 in calendars prior to 1939-40.

Graduates in Commerce whose courses have included Mathematics 7a and Commerce 67b are exempted from attendance and examination in all the subjects of the Commercial Course (Accountancy Option) except Shorthand Theory, Shorthand Practice and Transcription, Typewriting, Penmanship, Office Practice and Business Papers, Minor and Major Methods.

V. Interim High School Assistant's Certificate, Type A

For Graduates in Applied Science

Graduates of the Faculty of Applied Science may obtain the standing required for the Interim High School Assistant's Certificate, Type A, by taking certain additional courses as stated below.

1. In Mathematics and Physics

A degree in Applied Science in one of the Courses of Mining Engineering, Chemistry, Mineralogy and Geology, Chemical Engineering, Metallurgical Engineering, Civil Engineering, or Mechanical Engineering with a subsequent standing of at least 55 per cent. in each of the following courses and an average of at least 66 per cent. in the work of each subject.

Mathematics 12a, 15b, 19, and one other course, numbered over 19,

Physics 10b, 12a, 13b, 14a,

credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

A degree in Applied Science in the Department of Electrical Engineering with subsequent standing of at least 55 per cent. in each of the following courses and an average of at least 66 per cent. on the work of each subject:

Mathematics 12a, 15b, and one other course, numbered over 19,

Physics 10b, 12a, 13b, 14a,

credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

A degree in Applied Science in the Department of Physics with an average of at least 60 per cent. in Mathematics VII, Mathematics VIII and Mathematics X and with subsequent standing of at least 55 per cent. in each of the following courses and an average of at least 66 per cent.

Physics 10b, 12a, 13b, 14a,

credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

2. FOR THE INTERIM HIGH SCHOOL ASSISTANT'S CERTIFICATE, TYPE A, IN SCIENCE

A degree in Applied Science in one of the Departments of Mining Engineering, Chemistry, Mineralogy, Geology, Chemical Engineering, Metallurgical Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, or Physics, with a subsequent standing of 55 per cent. in each of the following courses, and an average of at least 66 per cent. in the work of each subject in courses numbered 10 or over:

Biology 1 or Grade XIII Biology, 10, 16, 11 or 19,

Physics 11, or 14a and 13b,

Geology 1,

Mineralogy 1,

Chemistry 10, and one of 12, 13, 14, 17 not previously taken, credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

VI. Inspectors' Certificates

The academic requirements for a Public School Inspector's certificate are as follows:

(1) An Honours degree in Arts or the degree of B.Com. (Commercial Specialists' Option) in accordance with the present agreement as prescribed for Specialist qualifications, or

(2) A Pass degree in Arts with a standard of 66 per cent. in any five courses beyond course 1, and Grade B in any other five courses.

(3) Candidates shall extend their Course over at least four years from the Secondary School Graduation Diploma and they shall fulfil the residence requirement prescribed by the Faculty of Arts for a degree in Arts (see page 55, regulation 9).

COURSES IN COMMERCE AND ADMINISTRATION

These Courses, leading to the degree of Bachelor of Commerce, were established in 1919 to assist in meeting the need which exists in Canada of more systematic training for business and public service.

The Commerce Course has been three years in length from Senior Matriculation but beginning with September 1949 a four year Course will supersede the three year programme. This Course is outlined in detail in the Announcement of the School of Commerce and Administration.

The requirement for admission to Commerce is Grade XII and Grade XIII as outlined under Admission by Matriculation, Section 3 a and b. Ex-servicemen and women applying for admission may enter on standing as approved by the National Conference of Canadian Universities in June, 1940, as follows:

Grade XII

English

French or another language

Mathematics (Algebra and Geometry)

One of: History

A language not already chosen: Latin, Greek, French,
German, Spanish or Italian

A science: Physics or Chemistry or Agriculture.

Students taking advantage of this regulation will register in their first year at the University on a preparatory programme including English 1, Mathematics 1, a science selected from Biology 1, Chemistry 1, Geology 1, Mineralogy 1, Physics 1, and a language which may be French or Latin or German or Greek or Spanish.

Students on the Commerce programme who are required to revert to the Pass Course may count towards the Pass degree as many as three courses in Commerce numbered fifty or over.

The Courses in Banking established in 1914 by Queen's University in co-operation with the Canadian Bankers' Association will hereafter be continued as part of the Courses in Commerce and Administration.

For further particulars consult the CALENDAR OF THE SCHOOL OF COMMERCE AND ADMINISTRATION, copies of which may be obtained from the Registrar.

COMBINED COURSE IN ARTS AND APPLIED SCIENCE

A Course leading to the Degrees of B.A. and B.Sc. in six years

Students taking this Course are required to have full standing for admission to the Faculty of Arts. They pay full Arts fees for the first two years. In the third and fourth years they register in both Arts and Applied Science but pay fees in Applied Science only. They register in the fifth and sixth years in the Faculty of Applied Science and pay fees in the Faculty of Applied Science.

The Arts regulation in regard to back classes applies for the first three years (see regulation 13 page 97 of the Arts calendar). Students with back classes in Arts are not permitted to make up these classes while they are registered in the Faculty of Applied Science.

The courses must be taken in the order in which they are outlined in the calendar.

The degree of Bachelor of Arts is conferred on candidates who complete four years' work as outlined below, with a minimum standing of fifty per cent. and sixty-two per cent. in half the classes.

First Year—English 2

Philosophy 1

COURSES LEADING TO THE DEGREE OF B.A.

One language course in addition to English 2 (course numbered 1 or 2 depending on the entrance standing in the language chosen. For example, candidates entering with Grade XII standing in French or German take French 1 or German 1; those entering with Grade XIII standing in French or German take French 2 or German 2).

Mathematics I (Applied Science)

Physics II (Applied Science)

Second Year—Three courses in Arts to be selected from courses which will not be covered later in Applied Science

Chemistry I (Applied Science)

Mathematics II (Applied Science)

Third Year—A course in History or Economics or Politics

Two courses in Arts to be selected from courses which will not be covered later in Applied Science

Physics I (Applied Science)

Drawing (Applied Science)

Surveying (Applied Science)

Fourth Year—The regular second year Science programme. The work of this year includes courses in Mathematics, Physics and Chemistry which count towards a degree in Arts.

Fifth and Sixth Years

The fifth and sixth years are the same as the third and fourth years of the Course leading to the degree of Bachelor of Science, as outlined in the calendar of the Faculty of Applied Science.

COMBINED COURSE IN ARTS AND PHYSICAL AND HEALTH EDUCATION

A Course leading to the degrees of Bachelor of Arts and Bachelor of Physical and Health Education in four years

Admission Requirements

Grade XII as for the Faculty of Arts, and

Grade XIII in English

Latin or Mathematics

Two of Biology (Botany and Zoology), Physics, Chemistry

Plus one other subject.

Candidates are advised to take Mathematics as one of their Grade XIII subjects.

Students entering with four subjects are required to have not lower than third class Honours standing in at least three of these subjects.

Subjects of Instruction		First Year	Hours Per Week
*One or two of			
Biology 1	}	3 hours' lectures 2 hours' laboratory	5
Chemistry 1			
Physics 1			
English 2 (A general introduction to English literature).....			3
Psychology 2			3
A language other than English			3
Free option, subject to timetable for students taking only one science			3
Physical Education			
Women—Seasonal sports and fundamental gymnastics			3
Aquatics			1
Dancing			1
Men — Seasonal sports			2
Aquatics			1
Fundamental gymnastics			2

*The selection from the courses in science will be dependent on the science or sciences offered at Grade XIII level. A student entering with Chemistry as part of his Grade XIII programme will take in his first year at the University Biology 1 and Physics 1. A student entering with Grade XIII standing including two sciences, e.g. Physics 1 and Chemistry 1, will take in his first year Biology 1 plus a free option scheduled for Monday, Wednesday, and Friday at 9 a.m., to make up his full programme.

Second Year

Philosophy 1 (Introduction to philosophy)	3
Psychology 12 (Psychology of the child)	3
Politics 2 (Introduction to government and politics).....	3
English 5** (Masterpieces of English literature)	3
Biology 16 (Comparative vertebrate anatomy) 2 hours' lectures, 3 hours' laboratory	5
Physical Education	
Women—Seasonal sports—rules and officiating	3
Rhythmics and theory of dance	1
Aquatics	1
Men — Seasonal sports—rules and officiating.....	2
Training and conditioning	2
Aquatics	1

Subjects of Instruction		Hours Per Week
<i>Third Year</i>		
English 7** (Canadian and American Literature)		3
Psychology 15 (Experimental psychology) 3 hours' lec. tures, 2 hours' laboratory		5
Two free options selected within the limitations of the timetable		6
Physiology, 2 hours' lectures, 2 hours' laboratory		4
Physical Education		
Women—Gymnastics and apparatus		2
Modern dance		2
Theory of coaching		1
Men — Team games—theory of coaching		2
Individual sports		2
Boxing and wrestling		1
Men and Women — Skiing—School for skiing during the Christmas vacation of the third year.		

**English 5 and 7 are not compulsory. The candidate may make up a group in another subject but care must be taken to provide for a total of three courses in the subject over a period of three years.

Fourth Year

Specialized Study under the Direction of the Staffs of The School of Physical and Health Education and The Faculty of Medicine		
Hygiene and preventive medicine		3
Theory of coaching		2
Organization of minor sports		1
Tests and measurements		1
Applied anatomy and kinesiology		4
Physical therapy, 2 hours' lectures, 1 hour practical4		3
History and principles of physical education		2
Coaching and officiating (men)		3
Gymnastics and correctives (women)		3
Practice teaching		2
Recreation and playground administration		3
Sound gymnasium practices		1
First aid and prevention of injuries		1
Modern dance (women only)		2

By agreement between Queen's University and the Ontario Department of Education a graduate of the Course in Arts and Physical and Health Education is admitted to the course of study at the Ontario College of Education leading to the Interim High School Assistant's Certificate, Type B, and to the High School Assistant's Certificate, Type A, in Physical and Health Education.

FEES

Fees are payable each year upon registration.

A student is not registered and may not attend classes until he has paid the required fees.

Sessional Fee—including Registration, Tuition, Library, Examinations

First, second and third years	\$ 235.00
Fourth year	259.00

Student Interests—including Health Insurance, Union, Faculty Societies, Alma Mater, Journal, and Athletics (the athletic fee which is part of student interests gives admission to all home games except playoffs) 30.50

The fees listed below are payable as they are incurred.

Laboratory Fee:

A fee is charged for all courses in Science:

Without Chemistry	3.00
With one course in Chemistry	6.00
With two or more courses in Chemistry	12.00

Special Charges:

Entrance Fee (payable by students registering for the first time)	5.00
Fee for <i>pro tanto</i> allowance on work done at another institution	5.00
Late registration (see also note page 5) minimum	3.00
Change of courses after registration	2.00
Late application—for examination or graduation	3.00

COMBINED COURSE IN ARTS AND THEOLOGY

A Course Leading to the Degree of B.A. and the Testamur in Theology in Five Years

Queen's University and Queen's Theological College join in offering a Combined Course in Arts and Theology. The complete Course covers five years. The first and second years are entirely within the Faculty of Arts and candidates must be fully qualified for admission to this faculty. The third year consists of one class in Arts, for which a fee of \$50 is charged, and the first year in Theology. The fourth and fifth years of the Combined Course are the second and third years in Theology.

The degree of Bachelor of Arts is awarded at the end of the third year to candidates who have passed in all their subjects and made Grade B in at least ten of the classes offered for the B.A. degree. The

Testamur in Theology is granted after the successful completion of the fifth year. Additional courses in Theology equivalent to at least one year of further study are required for the degree of Bachelor of Divinity.

First Year

1. English 2
2. Greek 1
3. Hebrew 1
4. A science
5. Philosophy 1

Second Year

1. Option
2. Greek 2
3. Hebrew 2
4. Option
5. Option

Third Year

1. An Arts course
2. Church History
3. Systematic Theology
4. Old Testament Criticism
5. New Testament Criticism
6. Practical Theology and Public Speaking

Fourth Year

1. Church History
2. Systematic Theology
3. Old Testament Criticism
4. New Testament Criticism
5. Practical Theology

Fifth Year

1. Church History
2. Systematic Theology
3. Old Testament Criticism
4. New Testament Criticism
5. Practical Theology

Students who offer Greek as one of the subjects on the Secondary School Graduation Diploma may take Greek 1 and 2 in the first year, and a freely chosen class in place of Greek 2 in the second year.

Students on the Combined Course in Arts and Theology who enter with Grade XIII without standing in Greek, may offer an additional course in Philosophy in place of Greek 2.

In choosing options students must plan to complete three courses in each of two subjects by the end of the third year.

DETAILS OF COURSES OF INSTRUCTION

ART

RESIDENT ARTIST AND ASSOCIATE PROFESSOR—André Biéler.

REGULATIONS AND ANNOUNCEMENTS

Art 1, Art 2 and Art 3 are offered in consecutive years and may be counted towards the degree of Pass B.A. either as a group or as individual free options. On recommendation of the Departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine Arts (Art, Music, Drama) to make up a group towards the degree of Pass B.A.

The aim of the courses is to show that the essential character of each period in history has been given expression through its art.

ART 1. (Offered in 1950-51.)

Prehistoric art in Europe, Ancient, Classical, Oriental, and North American art.

ART 2. (Offered in 1951-52.)

Early Christian, Romanesque and Gothic art; Renaissance and Baroque art in Italy.

ART 3. (Offered in 1949-50.)

Renaissance and Post Renaissance art in Northern and Western Europe; Modern art of the nineteenth and twentieth centuries.

STUDIO:

In conjunction with the lectures, there is a studio session, where, by actual practice, the student studies the different technical aspects of the arts of successive periods.

Text: *Art through the Ages*, by Helen Gardiner, 3rd Edition.

Lecture period—*Monday and Thursday*, 4.30-5.30.

Studio period—*Tuesday*, 3.30-5.30.

BACTERIOLOGY

PROFESSOR—G. B. Reed, O.B.E., M.A., B.Sc., Ph.D., F.R.S.C.

J. H. Orr, M.D., C.M., F.R.C.P. (C).

REGULATIONS AND ANNOUNCEMENTS

1. Students on the course for Nurses are required to take Bacteriology 10. Students on a pass course taking Biology as one of the

subjects of concentration may offer Bacteriology 10 as part of the Biology prescription.

2. Students taking Biology for Honours may include Bacteriology 13 and 14 as part of the Biology prescription. They should consult the head of the Department.

COURSES OF INSTRUCTION

BACTERIOLOGY 10.

An introductory course in general and pathogenic bacteriology primarily for nurses and pass students.

Prerequisites: 2 courses in Biology and 2 courses in Chemistry.

Lectures—Monday and Wednesday at 10.

Laboratory—Thursday, 1.30-4.30.

BACTERIOLOGY 13.

A systematic study of the disease producing bacteria, infection and immunity. For honours students.

Lectures—Monday, Wednesday and Thursday at 9.

*Laboratory—Monday 1-3 and Wednesday 10-12.30,
or Tuesday 1-3 and Friday 10-12.30.*

BACTERIOLOGY 14.

Advanced general bacteriology. For honours or graduate students.

Hours to be arranged.

BACTERIOLOGY 20. RESEARCH IN BACTERIOLOGY.

BIOCHEMISTRY

CRAINE PROFESSOR OF BIOCHEMISTRY—R. G. Sinclair, B.A., Ph.D., F.R.S.C.

ASSOCIATE PROFESSOR—J. F. Logan, A.M., Ph.D., F.C.I.C.

ASSISTANT PROFESSOR—Robert A. MacLeod, M.A., Ph.D.

REGULATIONS AND ANNOUNCEMENTS

The Honours Course in Biochemistry.

Candidates planning to take the Honours Course in Biochemistry are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), a language, Physics, and Chemistry. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

- (a) Chemistry 2, 10, 12, 13, 14, Biology 1, 10, 16, 21, 27; Biochemistry 18 and 20; one optional course to be selected from Chemistry 22, 24, 25, Bacteriology 10.

Three reading courses, two of which must be Biochemistry; the third reading course may be Biology, Chemistry or Biochemistry.

- (b) Compulsory general courses to complete the work for degree. English 2, Philosophy 1, a language, Mathematics 2.

- (c) One general examination in Biochemistry and one in Chemistry.

Students taking Honours in Biochemistry must consult the Head of the Department before registering for any course in Biochemistry.

COURSES OF INSTRUCTION

BIOCHEMISTRY 16. GENERAL BIOCHEMISTRY.

Prerequisite—Biology 1, 10; Chemistry 1, 2, 10, 12.

Texts: *Introduction to Biochemistry*, Williams and Beerstecher; *Laboratory Experiments in Physiological Chemistry*, Arthur K. Anderson.

Lectures—Monday and Friday at 11.

Laboratory—Monday, 1.30-4.30.

Professor Logan.

BIOCHEMISTRY 18. ANIMAL BIOCHEMISTRY.

A study of the composition and function of the compounds occurring in the animal organism. Particular attention is paid to the chemical basis of normal physiological processes in the human organism and of pathological derangements.

Prerequisite—Biology 1, 10; Chemistry 1, 2, 10, 12.

Texts:—

Harrow, *Textbook of Biochemistry*. Kleiner, *Human Biochemistry*. Hawk, Oser and Summerson, *Practical Physiological Chemistry*. Bodansky and Bodansky, *Biochemistry of Disease*.

Lectures—Monday and Saturday at 9; Thursday at 11.

Laboratory—Thursday, 2.00-5.30; Friday, 1.30-5.00; Saturday, 10-12.

A change in hours for lectures and laboratory may be made.

Professor Sinclair.

BIOCHEMISTRY 20—NUTRITION.

A general study of the nutrients required by various organisms, particularly from the standpoint of the evolution of biochemical mechanisms.

Texts: To be announced.

Hours to be arranged.

Professor MacLeod.

READING COURSES IN BIOCHEMISTRY:

R 1. Recent Advances in Biochemistry.

R 2. Enzymology.

R 3. After consultation with the Head of the Department, the student may elect either Biology R 2, Chemistry R 4, or research in Biochemistry.

BIOLOGY

THE JOHN ROBERTS ALLAN PROFESSOR OF BIOLOGY—R. O. Earl,
E.D., B.A., S.M., Ph.D.

PROFESSOR—G. Krotkov, B.S.A., M.A., Ph.D.

PROFESSOR—A. S. West, B.Sc., Ph.D.

ASSOCIATE PROFESSOR AND DIRECTOR OF THE BIOLOGICAL STATION
AT LAKE OPINICON—H. W. Curran, B.S., M.A., Ph.D.

ASSISTANT PROFESSORS—M. E. M. Sawyer, M.A., Ph.D.

H. M. Good, B.A., Ph.D.

(Beginning September, 1949)

REGULATIONS AND ANNOUNCEMENTS

1. Grade XIII standing in Biology or Biology 1 is prerequisite to all other courses in this Department.

2. Students taking Biology as one of the subjects of concentration on the Pass Course take Biology 10, 16, Bacteriology 10 or a third course in Biology selected on the advice of the Department.

3. For information in regard to Scholarships see page 75.

4. Honours Course in Biology.

Candidates planning to take the Honours Course in Biology are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Biology (Botany and Zoology), a language, and a fifth subject which should be Chemistry or Physics. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(I) *Course for Teachers.*

(a) The Major

The Major is made up as follows: Biology 10, 11, 12, 16, 17, 18, 19 or 45, 21.

Three reading courses in Biology selected from R1, R2, R3 or R4.

(b) The Minor

Chemistry 1 (unless the candidate has Grade XIII standing in Chemistry), 2, 12, Biochemistry 16 and Physics 1.

(c) Compulsory general courses to complete the work for degree. English 2, Philosophy 1, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in Biology.

(II) *Course for Botanists.*

(a) The Major

The Major is made up as follows: Biology 10, 11, 12, 21, 31,45, with two supporting courses, Bacteriology 10 and Physics 2, or a course in Zoology.

Three reading courses in Biology, R1, R2, R3.

(b) The Minor as prescribed in 4 (I) (b)

(c) Compulsory general courses as prescribed in 4 (I) (c)

(d) Two general examinations in Biology.

(III) *Course for Zoologists.*

(a) The Major

The Major is made up as follows: Biology 16, 17, 18, 19 or 20, 26, 45, with two supporting courses, Bacteriology 10 and Physics 2 or a course in Botany.

Three reading courses in Biology, R1, R2, R3, or R4.

(b) The Minor as prescribed in 4 (I) (b)

(c) Compulsory general courses as prescribed in 4 (I) (c)

(d) Two general examinations in Biology

5. *High School Teaching Certificate in Science.*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education take the Honours Course in General Science for Teachers (see below), or the regular Honours Course in two of Biology, Chemistry, Physics, with two courses from the third science in place of free options, or in substitution for courses ordinarily prescribed. For example, with Chemistry as Major, Biology as Minor, Physics 1, unless already taken in Grade XIII, is offered in place of

the free option and Physics 2 is substituted for one of Chemistry 22, 24, 25.

With Biology as Major, Chemistry as Minor, Physics 1, unless offered as one of the subjects of Grade XIII, is taken as one of the courses in the Minor and Physics 2 as a supporting course or in place of a free option as prescribed under the Departmental prescription in Biology.

With Physics as Major, Biology as Minor, Chemistry 1 is offered in place of a free option, and Chemistry 2 in place of a reading course.

6. *The General Honours Course in Science for Teachers*

- (a) Biology 10, 11, 16, 19 or 17, Reading Course 1.
- (b) Chemistry 2, 10, 12, 13, Reading Course 1.
- (c) Physics 2, 11, 14a, 13b, Reading Course 1, Mathematics 2.
- (d) Compulsory general courses to complete the work for degree: English 2, Philosophy 1, a language, a free option. If the candidate has Grade XIII standing in a language he may use the third general course as a free option.
- (e) One general examination in each special subject.

7. When Biology is the Minor associated with Chemistry as major, the Minor consists of Biology 10, 16, 17, Bacteriology 10, or another course in Biology with permission of the Department.

When Biology is the Minor associated with Psychology as Major, the Minor consists of 4 courses, including Biology 16, 26, and 45.

COURSES OF INSTRUCTION

BIOLOGY 1. GENERAL BIOLOGY.

A scientific study of plants and animals. The subject is treated in a comprehensive way with emphasis upon generalizations and principles. Laboratory study of examples.

Text-book: Mavor, *General Biology* (Macmillan).

Lectures—Monday, Wednesday, and Friday at 8.

Laboratory—Monday or Wednesday, 1.30-3.30.

Professor Earl.

BIOLOGY 10. GENERAL BOTANY.

The fundamental facts and principles of plant life. A careful study of form, structure and reproduction of representatives of the principal groups. Attention is given to life processes, particularly in the higher plants.

Prerequisite—Biology 1.

Text-book: Brown, *The Plant Kingdom* (Ginn).

Lectures—Tuesday and Thursday at 9.

Laboratory—Tuesday, 1.30-4.30.

Professor Krotkov.

BIOLOGY 11. PHANEROGAMIC BOTANY.

Taxonomy, morphology, life histories and evolution of seed plants.

Special attention is given to representatives of the local flora.

Prerequisite—Biology 10.

Text-books: Swingle, *Systematic Botany*. Eames and McDaniels.

Plant Anatomy.

Offered in 1950-51, but not in 1949-50.

Professor Earl.

BIOLOGY 12. CRYPTOGRAMIC BOTANY.

The lower plants treated as described for the seed plants in Biology 11.

Prerequisite—Biology 10.

Text-book: Smith, *Cryptogamic Botany* (McGraw-Hill).

Lectures—Tuesday and Thursday at 11.

Laboratory—Thursday, 1.30-4.30.

Offered in 1949-50, but not in 1950-51.

Professor Good.

BIOLOGY 16. COMPARATIVE VERTEBRATE ANATOMY.

This course deals with the comparative anatomy and development of the various systems in the vertebrate animals, with special attention to the study of mammalian anatomy.

Prerequisite—Biology 1.

Text-books: Neal and Rand, *Comparative Anatomy* (Blakiston).

Breland, *Manual of Comparative Anatomy* (McGraw-Hill).

Lectures—Tuesday and Thursday at 10.

Laboratory—Monday, or Wednesday, 1.30-4.30.

Professor Curran.

BIOLOGY 17. INTRODUCTION TO INVERTEBRATES.

A survey of representatives of the more important groups of invertebrates with reference to anatomy, taxonomy and life histories. Particular emphasis is given to phylogeny, and attention is directed to those forms which are of importance to man.

Prerequisite—Biology 1 or equivalent.

Text-books: Borradaile & Potts, *The Invertebrata* (Macmillan).
Woodsdalek, *General Zoology Laboratory Guide*.

Lectures—Tuesday and Thursday at 11.

Laboratory—Wednesday 1.30-4.30.

Professor West.

BIOLOGY 18. ENTOMOLOGY.

A survey of insects; morphology and internal anatomy, physiology and ecology, life history, habits and control of representatives of the more important orders and families. Particular emphasis is given to structure in relation to function and to the relation of the organism to its environment.

Prerequisite—Biology 17 (grade B).

May be limited to Honours students in Biology.

Text-books:

Essig, *College Entomology* (Macmillan). Ross, *A Text-book of Entomology* (Wiley). Metcalf & Metcalf, *A Key to the Principal Orders and Families of Insects*.

Lectures—Tuesday and Thursday at 10.

Laboratory—Tuesday, 1.30-4.30.

Professor West.

BIOLOGY 19. ECONOMIC VERTEBRATE ZOOLOGY.

A study is made of the more important vertebrate animals from an economic aspect such as commercial and game fishes, migratory waterfowl and game birds, significant fur-bearing animals. Emphasis is placed on conservation methods.

Prerequisite—Biology 16 (Grade B).

Lectures—Monday and Wednesday at 9. Limited to Honours Biology students.

Laboratory—Friday, 1.30-4.30.

Professor Curran.

BIOLOGY 20. HISTOLOGY AND EMBRYOLOGY.

Histology. A detailed study is made of the principal tissues of the body by an examination of fresh preparations and mounted specimens. This is followed by a study of the structure of the organs of the body.

Embryology. The course consists of a study of fertilization, cleavage and organogeny, especially of the mammal, with illustrative material drawn from the chick and the pig.

Prerequisite—Biology 16 (Grade B).

Text-books:

Jordan, *Text-book of Histology*. Maximow and Bloom, *Text-book of Histology*. Schafer, *Essentials of Histology*. Bailey, *Text-book of Histology*. Hamilton, Boyd and Mossman, *Human Embryology*.

Lectures—Thursday and Friday at 9.

Laboratory—Tuesday or Wednesday, 9-12.

Professors Melvin and Ettinger (Histology).

Professor Kropp (Embryology).

BIOLOGY 21. PLANT PHYSIOLOGY.

A general study of the following topics: carbon and nitrogen metabolism, nutrition, permeability, water-relations and growth.

Prerequisites—Biology 10, Chemistry 12.

Text-book: Meyer and Anderson, *Plant Physiology* (Van Nostrand).

Lectures—Tuesday and Thursday at 8.

Laboratory—Hours to be arranged.

Professor Krotkov.

BIOLOGY 26. ANIMAL PHYSIOLOGY.

This course is based on the application of physical and chemical principles in the explanation of physiological function. A study of structures, organs and systems in detail is followed by consideration of the functional characteristics and capacities of the organism as a whole.

The laboratory work consists of the technique and practice of the experimental method as applicable to physiological investigation, together with study of demonstrations.

Prerequisite—Biology 16.

Text-book: Best and Taylor, *The Living Body* (latest edition).

Lectures—Tuesday and Thursday at 11.

Laboratory—Thursday or Friday, 1.30-4.30.

Professor Sawyer.

BIOLOGY 27. ANIMAL PHYSIOLOGY (Medical).

The course is taken with the students in the Faculty of Medicine and lasts for thirty weeks.

Experimental Physiology. A laboratory course is given in the dynamics of muscle and nerve, the nervous system, circulation, respiration, digestion, secretion, excretion, etc.

Physiology. The subject is treated systematically and the lecture course is supplemented by demonstrations and by the work

in the experimental class. Special emphasis is laid on the application of Physiology to clinical study.

Prerequisites—Biology 16, Biology 20. The student must have taken, or be taking concurrently, Biochemistry 18.

Text-books: Bard, *McLeod's Physiology in Modern Medicine*; Best and Taylor, *Physiological Basis of the Practice of Medicine*.

Lectures—Monday at 9, Thursday at 2.30, Friday at 9.

Laboratory—Monday or Tuesday, 1.30-5.30.

Professors Melvin, Ettinger
and Sawyer.

BIOLOGY 31. PLANT ECOLOGY.

A study of the origin and development of plant associations in relation to environment. The relations of plants to latitude, altitude, climate, and other distributive factors. Ecological anatomy. Laboratory and field work.

Text-book:

Weaver and Clements, *Plant Ecology*, 2nd edition (McGraw-Hill). James, *Outline of Geography* (Ginn).

Prerequisite—Biology 10.

Offered in 1949-50 but not in 1950-51.

Lectures—Tuesday and Thursday at 11.

Laboratory—Thursday, 1.30-4.30.

Professor Earl.

BIOLOGY 45. EVOLUTION AND GENETICS.

A consideration of data and concepts of organic evolution; the principles of genetics; exercises on variation and heredity in plants and animals.

Text-book:

Riley, *Genetics and Cytogenetics* (Wiley).

Lectures—Monday, Wednesday and Friday at 11.

Professor Earl.

READING COURSES IN BIOLOGY

R. 1. Biological Theories.

Shull, *Evolution* (McGraw-Hill). Darwin, *On the Origin of Species*. Singer, *A Short History of Biology* (Oxford). Bertalanffy and Woodger, *Modern Theories of Development* (Oxford). Knobloch, *Readings in Biological Science* (Appleton, Century Crofts).

Professor Earl.

R 2. General Physiology.

L. V. Heilbrunn, *An Outline of General Physiology* (Saunders Co.). B. T. Scheer, *Comparative Physiology* (John Wiley and Sons). N. A. Maximov, *Plant Physiology* (McGraw-Hill).

Professor Krotkov.

R 3. Biological Aggregations.

Pearse, *Animal Ecology* (McGraw-Hill). W. C. Allee, *Animal Life and Social Growth* (Williams and Wilkins). Elton, *Animal Ecology* (Macmillan). Wheeler, *Social Life among the Insects* (Harcourt, Brace and Co.). Trippensee, *Wildlife Management* (McGraw-Hill). Vogt, *Road to Survival* (Sloane).

Professor Curran.

R 4. Advanced Entomology.

A list of reading material may be obtained from the instructor. With the approval of the Department this course may be substituted for R 3.

Professor West.

With the consent of the Department, a thesis may be substituted for either R 2 or R 3 but not for R 1. Application for permission to do this must be made to the Department within two weeks of the opening of the fall term.

GRADUATE COURSES

These courses will be given only when feasible and when suitably trained students apply.

BIOLOGY 112. ADVANCED PLANT PHYSIOLOGY.

A course in selected topics in the field of plant physiology.

Prerequisite—Biology 21.

Hours to be arranged.

Professor Krotkov.

BIOLOGY 113. COLD STORAGE AND GAS STORAGE.

Principles and technique in storage of fruits and vegetables. Metabolism of fruit during development on the plant and in storage.

Prerequisite—Biology 21.

Hours to be arranged.

Professor Krotkov.

BIOLOGY 114. ISOTOPES IN BIOLOGY.

Technique of isotope analysis, radioautographs, the use of isotopes in biology.

Hours to be arranged.

Professor Krotkov.

BIOLOGY 115. CYTOLOGY.

The structure and life-history of the cell.

Laboratory work, reading and conferences.

Prerequisite—Biology 45.

Hours to be arranged.

Professor Earl.

BIOLOGY 116. FOREST BIOLOGY *with particular reference to Insects and Fungi.*

Lectures, seminars, laboratory and field work.

Prerequisite—Biology 18.

Hours to be arranged.

With the approval of the Department, undergraduates may register in this course.

Professor West.

BIOLOGY 117. ADVANCED ENTOMOLOGY *with particular reference to microbiology, the relationship to insects of parasites, predators and microorganisms.*

Lectures, Seminars, Laboratory work.

Open to graduate students only.

Prerequisites—Biology 18; Bacteriology 10.

Text-books: to be assigned.

Hours to be arranged.

Professor West.

CHEMISTRY

PROFESSOR—J. A. McRae, M.A., Ph.D., F.R.I.C., F.R.S.C.

PROFESSOR—Grenville B. Frost, B.A., Ph.D.

PROFESSOR—L. A. Munro, M.A., Ph.D., F.R.S.C.

ASSOCIATE PROFESSOR—J. F. Logan, B.A., A.M., Ph.D., F.C.I.C.

ASSOCIATE PROFESSOR—Roy L. Dorrance, M.A.

ASSOCIATE PROFESSOR—W. M. Smith, B.Sc., Ph.D.

COMINCO FELLOW—S. M. Creighton, B.A.

MILTON HERSEY FELLOW—D. H. Boyd, B.A.

DEMONSTRATORS—W. L. Ott, B.Sc., Monica Lawless, B.A.,
H. I. Bolker, B.A., H. H. Brownell, B.A.,
A. F. McMillan, B.Sc., J. E. Milks, B.A.,
W. R. Park, B.A., W. V. Rublack, B.Sc.,
D. E. Rivington, B.Sc., S. Viron, B.Sc., J.
Coleman, Beryl Truscott.

REGULATIONS AND ANNOUNCEMENTS

1. Chemistry 1 or Grade XIII standing in Chemistry is required for admission to Chemistry 2, and Chemistry 2 is prerequisite to all other courses in Chemistry. Candidates should not attempt Chemistry 1 unless they have taken Junior Matriculation Chemistry.

2. Candidates offering Chemistry as one of the main subjects on a Pass Course will take Chemistry 2, 3, and 10. For entrance to all advanced courses in Chemistry except Chemistry 3 and 10 a candidate must have Grade B in Chemistry 2.

Pass students are not ordinarily admitted to Honours courses other than Chemistry 10 but exceptions may be made if the candidate has satisfactory standing in Chemistry 2 and 10.

3. The Honours Course in Chemistry.

Candidates planning to take the Honours Course in Chemistry are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Chemistry, a language and a fifth subject which should be Physics. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: Chemistry 2, 10, 12, 13, 14, 22, 24 or 25, and one of 17, 15a, 21b, or the one of 24, 25 not already chosen. Biochemistry 16 may be substituted for Chemistry 17. Mathematics 2 and two reading courses in Chemistry, namely, R1 and one of R2, R3, R5.

(b) The Minor

When the Minor is in Physics a student takes Physics 2, 11, 14a, 13b, and Mathematics 10a, 11b or 13. If Physics has not been included in the Grade XIII programme the candidate must complete Physics 1 before registering in Physics 2.

When the Minor is in Biology the student takes four courses in Biology selected in consultation with the Head of the Department of Biology, and Physics 1 unless Physics has been taken as one of the subjects of Grade XIII.

When the Minor is in Geology or Mineralogy the student takes Geology 1, Mineralogy 1 and either Geology 10b, 11, 14a, 15 or Mineralogy 10a, 10b, 11, 12.

- (c) Compulsory general courses to complete the work for degree.

With Physics or Biology as Minor: English 2, Philosophy 1, a language. If the candidate has Grade XIII standing in a language he may take an option in place of the third general course.

With Geology or Mineralogy as Minor: English 2, Philosophy 1.

- (d) Two general examinations in Chemistry.

4. When Chemistry is the Minor associated with Biology as Major, the Minor consists of Chemistry 2, 12, Biochemistry 16, and Physics 1 unless Physics has been offered as a subject of Grade XIII.

When Chemistry is the Minor associated with Geology or Mineralogy as Major, the Minor consists of Chemistry 2, 10, 13, 14.

5. Students taking Honours in Chemistry must consult the Head of the Department after they have passed Chemistry 2.

6. *High School Teaching Certificate in Science.*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education take the Honours Course in General Science for Teachers (see below), or the regular Honours Course in two of Biology, Chemistry, Physics, with two courses from the third science offered in place of free options, or in substitution for courses ordinarily prescribed. For example, with Chemistry as Major, Biology as Minor, Physics 1, unless already taken in Grade XIII, is offered in place of the free option and Physics 2 is substituted for one of Chemistry 22, 24, 25.

With Chemistry as Major, Physics as Minor, Biology 1, unless already taken as one of the subjects of Grade XIII, is offered in place of the free option and Biology 10 or 15 is substituted for one of Chemistry 22, 24, 25.

7. *The General Honours Course in Science for Teachers.*

The following courses are required:

- (a) Biology 10, 16, 11, 19, Reading Course 1.
- (b) Chemistry 2, 10, 12, 13, Reading Course 1.
- (c) Physics 2, 11, 14a, 13b, Reading Course 1, Mathematics 2.
- (d) Compulsory general courses to complete the work for degree:
English 2, Philosophy 1, a language, a free option. If the candidate has Grade XIII standing in a language he may use the third general course as a free option.
- (e) One general examination in each special subject.

8. For information in regard to Scholarships in Chemistry, see page 76.

9. Students taking Chemistry as the Major are advised to include German A in their Course. This is of particular importance to those who plan to proceed to graduate work.

COURSES OF INSTRUCTION

CHEMISTRY 1. GENERAL CHEMISTRY.

The student entering on this course should already have passed Junior Matriculation Chemistry.

The fundamental theories, laws and principles of chemistry are discussed and applied in the study of the principal non-metals and some of the more important metals and their compounds.

Text: Ehret, *Smith's College Chemistry* (Appleton-Century).

Spicer, Taylor and Clary, *General Chemistry Problems* (Wiley).

Laboratory Texts:—Kendall's *A Laboratory Outline of Smith's College Chemistry* (Appleton-Century).

Lectures—Tuesday, Thursday, Saturday at 10.

Laboratory—Monday, 1.30-3.30.

CHEMISTRY 2. GENERAL CHEMISTRY.

A more detailed and advanced course in general chemistry than Chemistry 1. It will be open only to those who have passed Chemistry 1 or who have standing in Upper School Chemistry or its equivalent.

The laws and theories of chemistry with particular attention to both their qualitative and quantitative applications. The chemistry of the principal non-metals and metals and their more important classes of compounds. In the laboratory numerous illustrative quantitative and qualitative exercises will be performed.

The student will be expected to work each week a set of assigned problems.

Text-books: Briscoe, *General Chemistry for Colleges* (Houghton-Mifflin); Morton, Clippenger, Eblen, *A Laboratory Programme for General Chemistry* (Houghton-Mifflin). Dorrance, *Experiments and Problems in General Chemistry* (Technical Supplies).

Lectures—Monday, Wednesday, and Friday at 10.

Laboratory—Thursday, 1.30-3.30.

Professor McRae.

CHEMISTRY 3. QUANTITATIVE ANALYSIS.—Pass Course.

(Open to pass students who have passed Chemistry 1, 2 and 10). This is an elementary course designed to illustrate the fundamental procedures of quantitative analysis.

Text: Dorrance, *Procedures and Problems in Quantitative Analysis* (Technical Supplies).

Lecture—Thursday at 1.30.

Laboratory—Tuesday, 1.30-5.30, in Room 207. Professor Dorrance.

CHEMISTRY 10. QUALITATIVE ANALYSIS.

(Open to pass students).

The lectures deal with the chemistry of metals and the theory of analytical chemistry. The modern concept of the structure of matter is related to analytical behaviour. The development and application of the laws of equilibrium and solutions are emphasized.

The laboratory work consists of the systematic analysis of basic and acid ions leading to the analysis of alloys, salt mixtures, minerals and various commercial products.

Prerequisite—Chemistry 1 and 2.

Text:

Curtman, *Semimicro Qualitative Analysis* (Macmillan).

Reference Texts:

Treadwell and Hall, Vol. I (Wiley). Engelder, *Calculations of Qualitative Analysis* (Wiley).

Lectures—Tuesday and Thursday, 11-12.

Laboratory—Friday, 1.30-4.30.

Professor McKay.

CHEMISTRY 12. ORGANIC CHEMISTRY.

Students in Biology or Biochemistry taking Chemistry as Minor may take Chemistry 10 and 12 in the same year.

An introductory course on the chemistry of the compounds of carbon. The principal classes of aliphatic and aromatic compounds are studied to illustrate both their theoretical and practical importance. In the laboratory a number of organic compounds is prepared to illustrate typical operations employed in organic chemistry.

Texts:

Prerequisite—Chemistry 2 with a minimum of 62%.

Conant and Blatt, *The Chemistry of Carbon Compounds* (Macmillan).

Adams and Johnson, *Laboratory Experiments in Organic Chemistry* (Macmillan).

Lectures—Wednesday and Friday at 11.

Laboratory—Monday 1.30-4.30, or Tuesday 1.30-4.30, or Friday 1.30-4.30, or Saturday 9-12.

Professor McRae.

CHEMISTRY 13. QUANTITATIVE ANALYSIS—Honours Course.

Students in Geology or Mineralogy taking Chemistry as Minor should take Chemistry 10 and 13 in the same year.

The theory and technique of gravimetric and volumetric analysis.

Text—Dorrance, *Procedures and Problems in Quantitative Analysis* (Technical Supplies).

Lectures—Tuesday and Thursday at 8.

Laboratory—Thursday, 1.30-4.30.

Professor Dorrance.

CHEMISTRY 14. PHYSICAL CHEMISTRY.

The pressure-volume relations of gases; the nature of the liquid and solid states; solutions; chemical and phase equilibria; thermochemistry; chemical kinetics, and other related topics.

Prerequisite—Chemistry 1, 2, 10, 13 and Mathematics 2. Chemistry 13 and 14 may be taken in the same year.

Text: Glasstone, *Elements of Physical Chemistry* (Van Nostrand).

Lectures—Tuesday and Thursday at 9.

Laboratory—Tuesday, 1.30-4.30.

Professor Frost.

CHEMISTRY 15a. COLLOID CHEMISTRY.

The lectures deal with the general properties of colloids. The laboratory work is illustrative of the topics dealt with in lectures and includes experiments on colloidal preparations, dialysis, pore size of membranes, relative and intrinsic viscosity, surface tension, molecular films, electrical properties, adsorption, foams, emulsions, gels, etc.

Prerequisites—Physics 1 and Chemistry 1, 2, 10, 12, 13, and 14.

Text: Hartman, *Colloid Chemistry* (Houghton-Mifflin).

Reference Texts:

Alexander, *Colloid Chemistry*, Vols. I-VI (Chem. Catalogue Co.). Weiser, *Hydrous Oxides* (Wiley). Lewis, Squires and Broughton, *Colloidal and Amorphous Materials* (Macmillan).

Lectures—Wednesday and Friday at 10, first term.

Laboratory—Tuesday, 1.30-4.30.

Professor Munro.

CHEMISTRY 17. INDUSTRIAL CHEMISTRY.

The lectures deal with the following topics: the characteristics and production of solid, liquid, and gaseous fuels; water purification and treatment; the petroleum industry; sulphuric, nitric, and hydrochloric acids; fertilizers; alkali; artificial fibres and the manufacture of wood pulp and paper.

In the laboratory the following processes are carried out: the catalytic production of sulphuric acid, nitric acid and formaldehyde; the determination of the composition and calorific value of fuels; water treatment and analysis and gas analysis. Emphasis is laid on the systematic recording and interpreting of results throughout the course.

Prerequisite—Chemistry 1, 2, 10, 12, 13 and Physics 1.

Chemistry 17 and 12 or 13 or both may be taken in the same year.

Text: Shreve, *Chemical Process Industries* (McGraw-Hill).

Lectures—Tuesday and Thursday at 10 in Ontario Hall.

Laboratory—Monday, 1.30-4.30, in Ontario Hall.

Mr. Marshall.

(Department of Chemical Engineering)

CHEMISTRY 21b. SURFACE CHEMISTRY.

The work of this course is designed to continue the work begun in course 15a. It is devoted to the study of gels, thermoplastic

and thermosetting resins, elastomers, synthetic rubber, sorption, the mechanism of catalysis, activation, promoters, carriers, retarders, mixed catalysts.

Prerequisite—Chemistry 15a.

Texts:

Powers, *Synthetic Resins and Rubbers* (Wiley). Griffith, *The Mechanism of Contact Catalysis* (Oxford University Press). Gregg, *Adsorption* (Methuen and Co.).

Reference Texts:

Modern Plastics Encyclopedia (Plastics Corp.). Ellis, *The Chemistry of Synthetic Resins* (Reinhold). Berkman, Morell and Egloff, *Catalysis* (Reinhold Corp.).

Lectures—Monday, Wednesday and Friday, at 11.

Professor Munro.

CHEMISTRY 22. ADVANCED ORGANIC CHEMISTRY.

The principal reactions used in synthetic organic chemistry with practical illustrations in the laboratory. The more detailed chemistry of the aliphatic and aromatic series and of the simpler types of heterocyclic compounds. Laboratory practice in qualitative and quantitative organic chemistry and organic preparations.

Prerequisite—Chemistry 1, 2, 10, 12, 13, 14, but Chemistry 22 and Chemistry 14 may be taken in the same year.

Texts:

Fieser and Fieser, *Organic Chemistry* (Heath). Conant and Blatt, *The Chemistry of Carbon Compounds* (Wiley). Adams and Johnson, *Laboratory Experiments in Organic Chemistry* (Macmillan).

Books of Reference:

Whitmore, *Organic Chemistry* (Van Nostrand). Karrer, *Organic Chemistry*. Gilman, *Organic Chemistry* (Wiley). Gattermann-Wieland, *Laboratory Methods of Organic Chemistry* (Macmillan).

Lectures—Tuesday and Thursday at 11.

Laboratory — Monday 1.30-4.30, or Tuesday 1.30-4.30, or Friday 1.30-4.30, or Saturday 9-12.

Professor McRae.

CHEMISTRY 24. ADVANCED PHYSICAL CHEMISTRY.

The principles of chemical thermodynamics and their application to chemical problems.

Prerequisite—Chemistry 1, 2, 10, 12, 13, 14.

Text:

Lewis and Randall, *Thermodynamics and the Free Energy of Chemical Substances* (McGraw-Hill).

Lectures—Tuesday and Thursday at 10.

Laboratory—Tuesday, Wednesday, or Friday, 1.30-4.30.

Professor Frost.

CHEMISTRY 25. ELECTROCHEMISTRY.

A discussion of the electrochemistry of aqueous solutions; applications to chemical analysis and to industrial processes, including fused systems.

The laboratory work includes electrolytic preparations, electrical measurements of the properties of solutions and electrometric titrations.

Prerequisite—Chemistry 1, 2, 10, 12, 13, 14.

Texts: Glasstone, *Introduction to Electrochemistry* (Van Nostrand) or Thompson, *Theoretical and Applied Electrochemistry* (Macmillan).

Lectures—First term, Monday at 10, Tuesday at 8.

Second Term, Monday at 10, Thursday at 8.

Laboratory—Wednesday, 1.30-4.30.

Professor Smith.

READING COURSES IN CHEMISTRY.

R 1. Inorganic Chemistry.

Partington, *Text-book of Inorganic Chemistry* (Macmillan).

Professor Smith.

R 2. Chemical Calculations.

Students taking this course should consult the instructor for assignment of books.

This course presupposes that the student has passed Mathematics 2.

Professor Dorrance.

R 3. History of Chemistry.

A course of selected reading in the history of chemistry, and the development of chemical theory. Students should consult the instructor for assignment of books and journal articles.

Professor Frost.

R 5. Industrial Chemistry.

(Only for students not taking Chemistry 17. R 5 and Chemistry 17 may not both be counted towards the Major in Chemistry).

Text: Shreve, *Chemical Process Industries*.

Professor McRae.

GRADUATE COURSES

CHEMISTRY 31. GENERAL AND INORGANIC CHEMISTRY—*Research Training*.

For graduate students electing thesis work in Inorganic Chemistry.

Professors Frost and Munro.

CHEMISTRY 32. ORGANIC CHEMISTRY—*Research Training*.

For graduate students electing thesis work in Organic Chemistry.

Professors McRae and McKay.

CHEMISTRY 33. QUANTITATIVE ANALYSIS—*Research Training*.

For graduate students electing thesis work in Quantitative Analysis.

Professor Dorrance.

CHEMISTRY 34. PHYSICAL CHEMISTRY—*Research Training*.

For graduate students electing thesis work in Physical Chemistry.

Professors Frost, Dorrance and Smith.

CHEMISTRY 35. COLLOID CHEMISTRY—*Research Training*.

For graduate students electing thesis work in Colloid Chemistry.

Professor Munro.

CHEMISTRY 37. INDUSTRIAL CHEMISTRY—*Research Training*.

For graduate students electing thesis work in Industrial Chemistry.

Professor Plewes.

CHEMISTRY 42. GRADUATE COURSE. ORGANIC CHEMISTRY.

Lectures will be given to qualified graduate students at hours to be arranged on a selection of topics in organic chemistry includ-

ing carbohydrates, proteins, terpenes, alkaloids, sterols, hormones and related substances, anthocyanins, modern theoretical organic chemistry.

This course will be given only when numbers warrant it and when otherwise it is deemed feasible.

Professor McKay.

CHEMISTRY 44. GRADUATE COURSE. PHYSICAL CHEMISTRY.

A study of principles underlying advanced physical chemistry.

Two lectures per week at hours to be arranged.

This course will be given only to properly qualified students and when numbers warrant it.

Professor Frost.

CLASSICS

PROFESSOR OF CLASSICS—H. L. Tracy, B.A., Ph.D.

PROFESSOR OF CLASSICS—S. E. Smethurst, M.A.

ASSISTANT PROFESSOR OF CLASSICS—Mary L. Macdonnell, M.A.

TUTORS IN CLASSICS, Session 1948-49—W. G. Condie, Margaret L. May, J. K. Buckley.

CLASSICAL LITERATURE

CLASSICAL LITERATURE 1.

A general course open to those who wish to study in English translations the literature of Greece and Rome.

Prescribed texts:

1. In the Modern Library: Homer, Vergil.

2. *Fifteen Greek Plays*, Cooper (Oxford University Press).

Reference Books:

1. Mythology: Bianchi, *The Mythology of Greece and Rome*; Bullfinch, *Mythology*. 2. Drama: Plautus (Loeb, vol. 2).

3. Satire: Herodes, Juvenal (Loeb). 4. Romance: Longus, Achilles Tatius (Loeb). 5. Biography: *Socratic Discourses* (Everyman); Plutarch, *Lives* (Everyman, vol. 3); Suetonius (Loeb). 6. Literary Criticism: Horace, *Satires, etc.* (Loeb); *Aristotle on the Art of Poetry*, Cooper (Harcourt, Brace and Co.). 7. General: *History of Ancient Greek Literature*, Murray; *Latin Literature*, Mackail.

Reference books are available to extramural students through the University Library.

Tuesday, Thursday, and Saturday at 9.

Professor Tracy.

For information in regard to Scholarships, see page 66.

CLASSICAL LITERATURE 20.

This course is, for the present session, identical with English 101, details of which are to be found on page 154.

GREEK LANGUAGE AND LITERATURE

GENERAL NOTICE

Liddell and Scott's *Greek Dictionary* (abridged edition) is recommended. A *Greek Grammar*, preferably that of Goodwin and Gulick, or Smyth, is necessary.

REGULATIONS AND ANNOUNCEMENTS

1. Greek A may be counted towards a degree under conditions specified in sections 16 and 17, GENERAL REGULATIONS. Under these regulations students who enter the University without matriculation in Greek, and who wish to specialize in this subject, may complete their programme of work in the usual time.

2. Students offering Greek as one of the main subjects on a Pass Course will take either (A) Greek A, 1 and 2, or Greek 1, 2 and one of Greek 10, 11, or (B) Courses in Classical Civilization, three of Classical Literature 1, Greek and Roman History 4, 51, History 12.

3. The Honours Course in Greek.

Candidates planning to take the Honours Course in Greek are advised to offer Grade XIII subjects as follows: English, Latin, Greek, a science, and a fifth subject which may be a third language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include any subjects that they lack.

(a) The Major

The Major is made up as follows: Greek 2, 10, 11, 21, 26, Greek and Roman History 51, with two supporting courses: Latin 12 and Greek and Roman History 4 if Latin is the Minor; Latin 2 and Politics 2 if Philosophy is the Minor. Greek 2 and 10 (or 11) should be taken in the same session. Three reading courses—Classics R1, R4 and one other. Classics R1 should be taken first, and as early as possible.

(b) The Minor

The Minor is usually in Latin or Philosophy, but in consultation with the Department of Classics a candidate may take his Minor in some other subject.

- (c) Compulsory general courses to complete the work for degree. With Latin as Minor: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science he may take a free option as the third general course. With Philosophy as Minor: English 2, a science. If the candidate has Grade XIII standing in a Science he may take a free option as the second general course.
- (d) Two general examinations in Greek.

4. A Minor in Greek normally consists of Greek 2, 10, 11, 21 (or Greek and Roman History 51 when Latin is not the Major).

5. *High School Teaching Certificate in Classics.*

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in Classics at the Ontario College of Education take the regular Honours degree course in Latin and Greek, or Greek and Latin.

6. For information in regard to Scholarships in Greek see page 66.

COURSES OF INSTRUCTION

GREEK A. FOR BEGINNERS.

Texts:

A New Introduction to Greek, Alston Chase and Henry Philips, Jr. (Tech. Supplies). *Greek Grammar*, Goodwin and Gulick (Ginn).

Monday at 1.30. Tuesday, Thursday, and Saturday at 9.

Professor Macdonnell.

GREEK 1.

Texts:

Greek Reader, Freeman and Lowe (Oxford, Clarendon Press). *The Iliad, I-XII*, Leaf and Bayfield (Macmillan); *The Acts of the Apostles*, Westcott and Hort's *New Testament*; *Greek Prose Composition*, North and Hillard (Rivington's).

Monday, Wednesday, and Friday at 11.

Professor Macdonnell.

GREEK 2

Texts:

Euripides, *Alcestis*, Earle (Macmillan); Plato, *Apology*, Stock (Oxford, Clarendon Press); *The Acts of the Apostles*, Westcott and Hort's *New Testament*.

Hours to be arranged.

Professor Tracy.

GREEK 10. EPIC POETRY, ORATORY.

Texts:

Demosthenes, *Olynthiacs*, Abbott and Matheson (Oxford, Clarendon Press); Lysias, *XVI Orations*, Shuckburgh (Macmillan); *Isocrates* (text to be arranged); Homer, *Iliad I-XII*, Merry (Oxford, Clarendon Press); *Greek Grammar*, Goodwin and Gulick (Ginn).

Hours to be arranged.

GREEK 11. HISTORIANS, COMEDY.

Texts:

Thucydides, Books I and II, Marchant (Macmillan); Aristophanes, *Acharnians*, and *Clouds*, Merry, (Oxford, Clarendon Press).

(Not given in 1949-50).

GREEK 21. TRAGEDY, MINOR DIALOGUES OF PLATO.

Texts:

Sophocles, *Antigone*, Jebb (abridged edition; Cambridge, Pitt Press). A prescription of reading from Plato will be arranged.

Hours to be arranged.

GREEK 26.

A history of ancient philosophy and the development of modern thought. This course is for the current session the same as Philosophy 10 and will be given by the Department of Philosophy. Philosophy 1 is prerequisite.

READING COURSES IN CLASSICS

Students are urged to cover as much as possible of their Reading Courses during the long vacation.

R 1. GREEK AND ROMAN LITERATURE, AND TOPICS SELECTED FROM RELIGION, ART, SOCIAL LIFE.

All students must prepare themselves in Greek and Latin Literature. One or two additional topics are to be chosen. A full bibliography cannot be given here. The basic books in the various fields are listed; others will be recommended to students when they have chosen their special topics. Literature: Croiset, *Abridged History of Greek Literature*; Mackail, *Latin Literature*. Religion: Moore, *The Religious Thought of the Greeks*; Bailey, *Phases in the Religion of Ancient Rome*. Art: P. Gardner, *Principles of Greek Art*; Walters, *The Art of the Romans*. Social Life: Glotz, *Ancient Greece at Work*; Warde Fowler, *Social Life at Rome*.

R 2. LIFE AND LETTERS IN THE EARLY EMPIRE.

Tacitus, *Annals*, XIII, XIV (Furneaux, Oxford University Press); Juvenal, *Satires*, 1, 3, 5, 7; Pliny's *Letters*, in *Selected Letters of Pliny*, Pritchard and Bernard (Oxford, Clarendon Press).

The above are to be supplemented by readings in the following books:

Capes, *The Early Empire*; Dill, *Roman Society from Nero to Marcus Aurelius*.

R 3. CLASSICAL TRAGEDY. Aeschylus, *Agamemnon*; Sophocles, **Oedipus Tyrannus*; Euripides, *Hippolytus*, **Medea*; Seneca, *Oedipus*, *Phaedra*; Corneille, *Médée* or *Oedipe*; Racine, *Andromaque*, *Phèdre*; Voltaire, *Oedipe*, *Oreste*; Dryden, *Oedipus*.

Sheppard, *Greek Tragedy*; Murray, *Ancient Greek Literature*; Lucas, *Seneca and Elizabethan Tragedy*; Wright, *French Classicism*; de Julleville, *Le Théâtre en France*; Faguet, *Propos de Théâtre*, essays on Racine in vols. 1 and 3; Vaughan, *Types of Tragic Drama*; Lucas, *Tragedy*; Nettleton, *English Drama of the Restoration and Eighteenth Century*; *Cambridge History of English Literature*, vol. VIII, the relevant chapters.

Classics students will read the plays marked * in Greek. Latin-French students will select for reading in the original any two of the French plays listed above. The remainder, in each case, will be studied in translations.

R 4. THE ODYSSEY OF HOMER.

Homer, *Odyssey*, ed. W. W. Merry (2 vols., Oxford, Clarendon Press); Victor Bérard, *Did Homer Live?*; R. C. Jebb, *Homer: An Introduction to the Iliad and the Odyssey*; T. D. Seymour, *Life in the Homeric Age*.

R 5. A syllabus of reading will be assigned to students who wish to study some particular field, such as: an ancient historian (in the original), a period of Greek History, a period of Roman History, etc.

HISTORY, GREEK AND ROMAN

COURSES OF INSTRUCTION

GREEK AND ROMAN HISTORY 4. A Survey of Greek and Roman Society.

An introductory account of Greek and Roman political and social development; the period from the rise of the Greek city-states to the death of Augustus will be studied and the student will be expected to pay particular attention to those aspects of

Greek and Roman society which are most important for an appreciation of modern ideas and institutions.

Texts:

Trevelyan, *History of Ancient Civilization*, 2 vols. (Harcourt, Brace);
Thucydides, *History of the Peloponnesian War* (Everyman).

Certain other works dealing with special problems or aspects of Greek and Roman History will be available to extramural students through the lending facilities of the University Library.

Tuesday, Thursday, and Saturday at 11.

Professor Smethurst.

GREEK AND ROMAN HISTORY 51: Advanced study of certain problems in Greek and Roman History, such as the growth of the city state, the development of Athenian democracy, the rise of federalism, the collapse of the Roman Republic. The course will be adapted as far as possible to suit the interests of individual students.

Prerequisite: Greek and Roman History 4.

Professor Smethurst.

For information in regard to Scholarships, see page 66.

LATIN LANGUAGE AND LITERATURE

GENERAL NOTICE

For the Pass classes, Lewis' *Latin Dictionary for Schools* (Oxford University Press) is recommended, or Lewis' *Elementary Latin Dictionary* (Oxford University Press). Honours students must provide themselves with Lewis and Short's *Latin Dictionary* (Oxford University Press, and Allen and Greenough's *New Latin Grammar* (Ginn and Co.).

REGULATIONS AND ANNOUNCEMENTS

1. A student taking Latin as one of the main subjects on a Pass Course will take either (A) Latin 2, 12 and 13, or (B) courses in Classical Civilization, three of Classical Literature 1, Greek and Roman History 4, 51, History 12.

2. The Honours Course in Latin.

Candidates planning to take the Honours Course in Latin are advised to offer Grade XIII subjects as follows: English, Latin, a science, a second language and a fifth subject which may be a third language, a second science or History. Candidates who cannot offer the above programme but who have full standing for admission to the

Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: Latin 2, 12, 13, 20, 30, 31, with two supporting courses: when Greek is the Minor, the supporting courses are Greek and Roman History 4, 51; when English is the Minor, supporting courses are an Honours course in History, and one of French 2, German 2; when French is the Minor, supporting courses are an Honours course in History, and an Honours course in English. Latin 2 and 12 *or* 13 should be taken in the same session.

Three reading courses: when Greek is the Minor, any three; otherwise, Classics R1, R2, R3. Classics R1 should be taken first, and as early as possible.

(b) The Minor

The Minor is normally taken in Greek, French, English or Philosophy.

(c) Compulsory general courses to complete the work for degree

With a Minor in Greek or French: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science he may take a free option as the third course.

With a Minor in English: Philosophy 1, a science, a free option. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

With a Minor in Philosophy: English 2, a science. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

(d) Two general examinations in Latin.

3. A Minor in Latin normally consists of Latin 2, 12 *or* 13, 20, and 30.

4. Honour students continue throughout their courses the study of morphology, historical grammar, syntax, prosody and composition. These are part of the prescription for Latin 12, 13, 20, 30.

5. *High School Teaching Certificates in Classics, Latin and English, Latin and French.*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Classics at the Ontario College of Education take the regular Honours degree Course in Latin and Greek.

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Latin and English or Latin and French at the Ontario College of Education take for degree:

Latin 2, 12, 13, Greek and Roman History 4, two of Latin 20, 30, Greek and Roman History 51.

Six lecture courses in English or in French.

Latin Reading courses 1 and 2 or 5, and a reading course in English or French, *or*

Latin Reading course 1, and two reading courses in English or in French.

Compulsory general courses to complete the work for degree:
With Latin and English: Philosophy 1, a science, a free option. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

With Latin and French: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science he may take a free option as the third general course.

One general examination in each of Latin and English, or Latin and French.

6. For information in regard to Scholarships in Latin see page 66.

COURSES OF INSTRUCTION

LATIN 1. Translation and Interpretation of Prescribed Texts, Sight Translation, Prose Composition.

Texts: *Latin Prose and Poetry*, Bonnie and Niddrie (Montreal, Ginn and Company); *Latin Prose Composition*, Tracy and Law (Clarke, Irwin and Co.).

A tutorial period will be given for the benefit of students who desire extra assistance.

Monday, Wednesday, and Friday at 10.

Professor Smethurst.

LATIN 2. Translation and Interpretation of Prescribed Texts, Sight Translation, Prose Composition.

Texts:

Vergil, *Aeneid* I-VI, Page (Macmillan); *Oxford Book of Latin Verse* (School edition: Oxford University Press).

Exercises in Latin prose composition will be assigned.

Extramural students should supply themselves with the *Classical Dictionary* in the Everyman series (J. M. Dent), and *Roman Literature*, Wilkins (Literature Primers: Macmillan).

Tuesday, Thursday, and Saturday at 11.

Professor Tracy.

LATIN 12. VERGIL. History of the Latin Epic. The *Aeneid*. Brief study of the *Eclogues* and *Georgics*.

P. Vergili Maronis Opera, Sidgwick (Cambridge University Press).

Tuesday, Thursday, and Saturday at 10.

Professor Tracy.

LATIN 13. POETS OF THE GOLDEN AGE. Catullus, Horace, Tibullus, Propertius.

Catullus, Merrill (Ginn and Co.); *Q. Horati Flacci Opera*, Page, Palmer and Wilkins (Macmillan); *The Roman Elegiac Poets*, Carter (D. C. Heath).

(Not offered in 1949-50.)

LATIN 20. I. ROMAN HISTORIANS. Livy, Sallust, Cicero.

II. ROMAN COMEDY. Plautus, Terence.

Selected Letters of Cicero, Abbott (Ginn and Co.); Livy, Books XXX-XXXIII, Mendell (Appleton, Century); Sallust, ed. Capes (Clarendon Press); Plautus, *Mostellaria*, Fay (Allyn and Bacon); *The Comedies of Terence*, Ashmore (Oxford University Press).

Hours to be arranged.

LATIN 30. ROMAN PHILOSOPHY. Stoicism: Cicero, Juvenal, Seneca. Epicureanism: Lucretius.

Cicero, *De Natura Deorum*, Plasberg (Teubner); Juvenal, *Satires*, Duff (Cambridge University Press); Seneca, *Select Letters*, Summers (Macmillan); Lucretius, *De Rerum Natura*, Books I, III, Duff (Cambridge University Press).

(Not offered in 1949-50.)

LATIN 31. Intensive reading in an author chosen by the student, with consultations and research assignments.

Graduate Courses

Lecture courses and directed special studies will be offered in Latin, Greek, or Greek and Roman History as needed.

DRAMA

ASSOCIATE PROFESSOR AND DIRECTOR OF DRAMA—

William Angus, M.A., Ph.D.

The course in Drama may count as an optional course towards the degree of Pass B.A. On recommendation of the Departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine Arts (Drama, Art, Music) to make up a group towards the degree of Pass B.A.

DRAMA. The Theatre as an Art Form.

A survey of the development of theatrical art by a study of representative plays, supplemented by practice in play production.

Text-books:

John Dolman, Jr., *The Art of Play Production* (New York: Harpers); Cleanth Brooks and Robert B. Heilman, *Understanding Drama—Twelve Plays* (New York: Henry Holt or Toronto: Clarke, Irwin).

Wednesday, 1.30-2.30; *Friday*, 1.30-3.30.

Laboratory period—To be announced.

ECONOMICS, SEE POLITICAL AND ECONOMIC SCIENCE

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR—Henry Alexander, M.A., F.R.S.C.

PROFESSOR—James A. Roy, M.A.

PROFESSOR—Charles J. Vincent, M.A., Ph.D.

ASSOCIATE PROFESSOR—Wilhelmina Gordon, M.A.

ASSISTANT PROFESSOR—E. A. Walker, M.A.

ASSISTANT PROFESSOR—Arnold Edinborough, M.C., M.A.

REGULATIONS AND ANNOUNCEMENTS

1. English 2 is required of all candidates for a degree in Arts. English 2 is prerequisite to all courses numbered higher except English 10.

2. English 2 and two of 3, 5 and 7 are intended for students offering English as one of the main subjects for a Pass degree. Pass students are not ordinarily admitted to Honours courses but exceptions may be made with the consent of the Department. Pass students wishing to apply for admission to an Honours course are advised to consult the

Head of the Department before leaving the University in the previous summer.

Students who have at least second class honours in the Upper School examinations in English Literature and Composition and who intend to enter the Honours Course in English shall take courses 2 and 10 in the same year. They must obtain a standing of at least B in these courses if they wish to continue in Honours work.

If students without the above qualifications wish to enter the Honours Course they shall take English 2 and if they obtain a standing of at least B on this course they may proceed in the second year to 10 and 15.

3. The Honours Course in English.

Candidates planning to take the Honours Course in English are advised to offer Grade XIII subjects as follows: English, Latin, a science, a second language and either a third language or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: English 2, 10, 14a, 14b, 15, 19, 20, 22, with one supporting course, Latin 2.

Three reading courses in English of which Reading Course 1 shall be one.

(b) The Minor

The Minor may be taken in History, French, Latin, Greek, German, Philosophy, or Spanish (Note: When the Minor is Latin, the supporting course for the Major is normally French).

(c) Compulsory general courses to complete the work for a degree. With History or French or Latin or Greek or German or Spanish as Minor: Philosophy 1, a science, a free option. If the candidate has Grade XIII standing in a science he may use the second general course as a free option.

With Philosophy as Minor: a science, two free options. If the candidate has Grade XIII standing in a science he may use the first general course as a free option.

(d) Two general examinations in English.

4. Except by special permission of the Department, students making English their Major subject in Honours take their courses in the following order: 2, 10; 14a, 14b, 15; 19, 20; 22, with one reading course in each

of the second, third, and fourth years. As the Honours Course is planned as a progressive whole it is important that this order be kept.

5. A Minor in English normally consists of English 2, 10, and any two chosen from 15, 19, 20, and 22.

6. Students offering English for the General Honours Course take the Minor as prescribed in 5 together with one reading course.

7. (a) *High School Teaching Certificate in English*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in English at the Ontario College of Education take the specialized Honours degree Course in English with a Minor in Social History as follows: History 3, 16, and two of 17, 18a and 18b, 24, 28. French 2 or German 2 must be included in the general courses.

(b) *High School Teaching Certificate in English and Latin, English and French*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in English and Latin, or English and French at the Ontario College of Education take for degree:

Six lecture courses in English: 2, 10, 14a, 14b, 15, 20, 22.

Six lecture courses in Latin (page 144) or in French (page 156).

Two English reading courses and a reading course in Latin, or in French, or

One English reading course and two reading courses in Latin, or in French.

Compulsory general courses to complete the work for degree:

With English and Latin: Philosophy 1, a science, a free option.

If the candidate has Grade XIII standing in a science he may use the second general course as a free option.

With English and French: Philosophy 1, Latin 2, a science.

If the candidate has Grade XIII standing in a science he may use the second general course as a free option.

One general examination in each of English and Latin, or English and French.

8. For information about Scholarships in English see page 67.

COURSES OF INSTRUCTION (Pass)

Note: Students in each of the following courses will be furnished with a list of recommended reference books in addition to those required. *Owing to present conditions some of the books prescribed may not be available in September, 1949. Changes may therefore be made at short notice.*

ENGLISH 1. PROSE COMPOSITION, WITH LITERARY BACKGROUND.

A practical course in Prose Composition, with parallel reading. Prescribed texts:

N. Foerster and J. M. Steadman, *Writing and Thinking* (Boston: Houghton Mifflin; Toronto: Thomas Allen); Dorothy Brewster, *A Book of Modern Short Stories* (Toronto: Macmillan); H. L. Tinker, *Essays—Yesterday and To-Day* (Toronto: Macmillan).

During the session at least one novel, one biography, and one play will be prescribed.

Monday, Wednesday, Friday, at 10.

ENGLISH 2. A GENERAL INTRODUCTION TO ENGLISH LITERATURE.

This course provides instruction in the history of English Literature. Emphasis is placed also on composition.

Prescribed text:

The College Survey of English Literature, Shorter edition in one volume (New York: Harcourt, Brace).

For reference:

Moody and Lovett, *A History of English Literature* (New York: Charles Scribner's Sons).

Sections A1, A2, A3—Monday, Wednesday, Friday at 10.

Sections B1, B2—Tuesday, Thursday, Saturday at 9.

Sections C1, C2, C3—Tuesday, Thursday, Saturday at 11.

Each student must possess a satisfactory English dictionary.

Students who have already received a credit for a Survey Course in English Literature may, with the approval of the Department, substitute English 3, 5, or 7.

ENGLISH 3. MODERN FICTION.

A study of the novel and the short story of the nineteenth and twentieth centuries, including books by Canadian and American authors.

Prescribed texts: a list may be obtained from the Department of English or from the Registrar's Office.

(Offered in 1950-51.)

Monday, Wednesday, Friday at 11.

Professor Gordon.

ENGLISH 5. MASTERPIECES OF ENGLISH LITERATURE.

Study of Shakespeare's *I Henry IV*, *King Lear*, *The Tempest*; Milton's *Samson Agonistes*; Pepys's *Diary*; Bunyan's *The Pilgrim's Progress*; Swift's *Gulliver's Travels*; Fielding's *Tom Jones*; Boswell's *Life of Dr. Johnson*; Burke's *On Conciliation with America*; Newman's *Idea of a University*; some examples of modern poetry.

(Offered in 1949-50.)

Tuesday, Thursday, Saturday at 10.

ENGLISH 7. AMERICAN AND CANADIAN LITERATURE.

Prescribed texts: Howard Mumford Jones and Ernest E. Leisy edd., *Major American Writers* (New York: Harcourt, Brace); A. J. M. Smith, ed., *The Book of Canadian Poetry* (Toronto: W. J. Gage).

Monday, Wednesday, Friday at 9.

Professor Vincent.

COURSES OF INSTRUCTION (HONOURS)

ENGLISH 10. AN INTRODUCTION TO HONOURS IN ENGLISH.

A general study of the history of the English language, of literary forms, and of the fundamental principles of literary criticism.

Prescribed texts:

Henry Alexander, *The Story of Our Language* (Toronto: Thomas Nelson); J. H. Smith and E. W. Parks, edd., *The Great Critics* (New York: W. W. Norton); E. Earnest, *A Foreword to Literature* (New York: D. Appleton-Century).

Tuesday, Thursday, Saturday at 10.

Professor Alexander and Professor Edinborough.

Note: This course is intended only for those who propose to take Honours in English.

ENGLISH 14a. OLD ENGLISH.

C. Alphonso Smith, *An Old English Grammar and Reader* (Boston: Allyn and Bacon).

Monday, Wednesday, Friday at 3.30.

Professor Alexander.

ENGLISH 14b. MIDDLE ENGLISH.

A study of the transition writers and of Chaucer's development, based on the following works: *The Romaunt of the Rose*, *The Book of the Duchesse*, *The Parlement of Foules*, *Troilus and Criseyde*, *The House of Fame*, *The Prologue to the Legend of Good Women*, *The Canterbury Tales*.

Prescribed texts:

Chaucer's Complete Works, edited by F. N. Robinson (Boston: Houghton Mifflin); *The Nun's Priest's Tale*, edited by K. Sisam (Toronto: Oxford University Press); Grace Hadow, *Chaucer and His Times*, Home University Library (Toronto: Clarke, Irwin; New York: Henry Holt); R. Morris, *Specimens of Early English* (Toronto: Oxford University Press).

Monday, Wednesday, Friday at 3.30.

Professor Alexander.

ENGLISH 15. SHAKESPEARE AND ELIZABETHAN DRAMA.

A review of the life and environment of Shakespeare, and of his development as a dramatist, with lectures on the lives and works of his chief forerunners and contemporaries.

Prescribed texts:

The Complete Works of Shakespeare (any available edition); Hazleton Spencer, *Elizabethan Plays* (Toronto: Copp, Clark); H. Granville-Barker and G. B. Harrison edd., *A Companion to Shakespeare Studies* (Toronto: Macmillan Co. of Canada).

Tuesday, Thursday, Saturday at 9.

Professor Edinborough.

ENGLISH 19. ENGLISH LITERATURE 1500-1780.

First Term: English Literature: 1500-1660 (including Milton).

Prescribed texts:

Edmund Spenser, *Poems* (Oxford University Press); Sir Philip Sidney, *An Apologie for Poetrie* (Oxford University Press); John Milton, *Poems* (Oxford University Press), John Milton, *Areopagitica* (Oxford University Press); *Seventeenth Cen-*

tury Prose and Poetry, ed., R. P. T. Coffin and A. M. Wither-
spoon (New York: Harcourt Brace), or *Metaphysical Lyrics
and Poems of the Seventeenth Century*, ed., H. J. C. Grierson
(Oxford University Press).

For reference:

Elizabethan Critical Essays, ed., Gregory Smith (Oxford Uni-
versity Press); *The Golden Hind*, ed., R. Lamson & H. Smith
(New York: Norton & Co.)

Professor Gordon.

Second Term: English Literature: 1660-1780

Prescribed texts:

Nettleton and Case ed., *British Dramatists from Dryden to
Sheridan* (Boston: Houghton Mifflin); Odell Shepard and Paul
Wood ed., *English Prose and Poetry, 1660-1800* (Boston: Hough-
ton Mifflin); Dryden, *Poems*, Pope, *Poems*, Globe editions,
(London and Toronto: Macmillan).

Reference works:

*English Critical Essays of the Seventeenth and Eighteenth Cen-
turies* (Toronto: Oxford University Press); Matthew Arnold,
ed., *Johnson's Lives of the Poets* (London and Toronto: Mac-
millan); J. H. Smith and E. W. Parks, ed., *The Great Critics*
(New York: W. W. Norton).

Tuesday, Thursday, Saturday at 11.

Professor Roy.

ENGLISH 20. ENGLISH LITERATURE FROM 1780 TO 1850.

Students are expected to be familiar with the poetry of Blake,
Burns, Crabbe, Coleridge, Wordsworth, Scott, and Southey,
and of Byron, Shelley, and Keats; Lamb, *Essays of Elia*; Hazlitt,
The Spirit of the Age and *Table Talk*; Wordsworth, *Preface to
Lyrical Ballads*; Coleridge, *Biographia Literaria*, Chaps. 14-22;
Dorothy Wordsworth's *Journals*; Southey's *The Doctor*; Scott's
Journal; Hunt's *Autobiography*; Moore's *Diary*; Letters of Words-
worth, Lamb, Byron, Shelley, Keats.

Prescribed texts:

George B. Woods, ed., *English Poetry and Prose of the Romantic
Movement* (Chicago: Scott, Foresman); William Wordsworth,
Poems (Toronto: Oxford University Press); George Gordon
Byron, *Poems* (Toronto: Oxford University Press); *The Com-*

plete *Poems of Keats and Shelley*, Modern Library, (Toronto: Macmillan). Any editions of the *Poetical Works of Coleridge* and Scott.

Tuesday, Thursday, Saturday at 9.

Professor Roy.

ENGLISH 22. STUDIES IN ENGLISH LITERATURE FROM 1850 TO 1942.

Prescribed texts:

G. B. Woods, H. A. Watt, and G. K. Anderson, edd., *The Literature of England* (3rd edition, Toronto: W. J. Gage), Vol. 2.

Monday, Wednesday, Friday at 11.

Professor Vincent.

A seminar course which should be taken in the final year of honours work.

READING COURSES IN ENGLISH:

The prescribed texts for reading courses may be obtained from the Registrar's Office.

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|--|-------------------------|
| R 1. American and Canadian Literature. | (Professor Vincent) |
| R 2. The English Novel before 1860. | (Professor Gordon) |
| R 3. The English Novel after 1860. | (Professor Gordon) |
| R 4. Literary Criticism: Classical. | (Professor Roy) |
| R 5. Literary Criticism: Modern. | (Professor Roy) |
| R 6. Restoration and Eighteenth Century Drama. | (Professor Roy) |
| R 7. Modern Drama. | (Professor Edinborough) |
| R 8. Beowulf. | (Professor Alexander) |
| R 9. Middle English Literature (other than Chaucer). | (Professor Alexander) |
| R 13. Prosody. | (Professor Gordon) |

GRADUATE COURSES

ENGLISH 100. METHODS AND PRINCIPLES OF LITERARY STUDY.

A seminar course. Time to be arranged.

First term: Professor Alexander.

Second Term: Professor Vincent.

ENGLISH 101. TRAGEDY.

A seminar course in conjunction with the Department of Classics. Times to be arranged.

FRENCH LANGUAGE AND LITERATURE

PROFESSOR—W. H. Evans, B.A., Docteur de l'Université de Paris.

PROFESSOR—M. Tirol, O.I.P., L. ès L., Ph.D.

ASSOCIATE PROFESSOR—Glen Shortliffe, M.A., Ph.D. (on leave, Session 1949-50).

ASSISTANT PROFESSOR—R. L. Fauconnier, L. ès L., Agrégé de l'Université.

LECTURER—Jean Ogier, L. ès L. (Session 1949-50).

INSTRUCTOR—Jeanne M. McConnell, Brevet Supérieur, C.A.P.

REGULATIONS AND ANNOUNCEMENTS

1. French 1 is prerequisite to French 2, and French 2 is prerequisite to all other courses in French.

2. Students offering French as one of the main subjects on a Pass Course will take 2, 3, 14. By permission of the Head of the Department 10 may be taken as an extra course after 3 and 14.

3. The Honours Course in French.

Candidates planning to take the Honours Course in French are advised to offer Grade XIII subjects as follows: English, Latin, French, a science and a fifth subject which may be a third language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: French 2, 10, 11, 20, 21, 23 and 25; of these 10 and 20 will be taken in the first year after admission to Honours, 11 and 21 in the second year, 23 and 25 in the third year, with one supporting course chosen from Latin 2, Greek and Roman History 4, Classical Literature, English 15.

Three reading courses: French R 1, R 2, R 3.

(b) The Minor

The Minor must be taken in Latin, English, German, Spanish, History or Greek and Roman History. The prescribed courses may be found under the Departmental prescriptions of the subject selected as the Minor.

(c) Compulsory general courses to complete the work for degree:

With Latin, German, Spanish or History as Minor: English 2, Philosophy 1, a science. If the candidate has Grade XIII stand-

ing in science he may use the third general course as a free option.

With English as Minor: Philosophy 1, a science, a free option. If the Candidate has Grade XIII standing in a science he may use the second general course as a free option.

(d) Two general examinations in French.

4. *The High School Teaching Certificates in Latin and French, English and French, French and German, French and Spanish.*

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in Latin and French, English and French, French and German or French and Spanish at the Ontario College of Education must take for degree:

Six lecture courses in French: 2, 10, 11, 20, 21, 23.

Six lecture courses in Latin or English or German or Spanish.

French reading courses 1 and 2 and *one* reading course in Latin, or in English, or in German, or in Spanish *or*

French reading course 1 and *two* reading courses in Latin, or in English, or in German, or in Spanish.

(d) Compulsory general courses to complete the work for degree. With French and Latin: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science he may use the third general course as a free option.

With French and English: Philosophy 1, Latin 2, a science. If the candidate has Grade XIII standing in a science he may use the second general course as a free option.

With French and German or Spanish: English 2, Latin 2, Philosophy 1. If the candidate did not offer a Grade XIII science on admission, he must take a course in science in place of one of the reading courses in the special subject in which two reading courses are normally required.

One general examination in each of French and Latin, English and French, French and German, or French and Spanish.

5. A Minor in French normally consists of French 2, 10, 11, 14.

6. Students offering French for the General Honours Course take the Minor as prescribed in 5 with Reading course 1.

7. Oral Work.

(a) All oral examinations must be taken at the University.

- (b) An oral examination is required of students taking French 2 (see French 2) and courses over French 2.
- (c) All students taking any course numbered over 2 attend oral classes for one hour a week and take the oral examination in March. Students taking French 2 may be required to attend such classes.
- (d) Hours are arranged at the beginning of term.
- (e) The text-book for French 10 or over is Bascan, *Manuel pratique de Prononciation* (Dent).

8. For information about Scholarships in French see page 69.

9. All students must provide themselves with a dictionary. For Pass classes Harrap's *Shorter French and English Dictionary* should be procured. For Honours classes *Le Petit Larousse Illustré* is indispensable.

MASTERPIECES OF FRENCH AND GERMAN FICTION IN TRANSLATION

Prerequisite, English 2.

Not given 1949-50.

FRENCH 1. FIRST YEAR FRENCH.

Marie-Claire (Oxford); *Quelques Contes des Romanciers Naturalistes* (Heath); Pagnol, *Topaze* (Heath); Barton and Sirich, *Simplified French Review Grammar and Composition* (Crofts).

Extramural students will also use:—

Duhamel and Minssen, *Primer of French Prose Composition* (Rivingtons).

Monday, Wednesday, and Friday at 11.

Tuesday, Thursday, and Saturday at 11.

Professor Fauconnier and Mr. Ogier.

FRENCH 2. SECOND YEAR FRENCH.

J. Romains, *Louis Bastide* (Holt); Bazin, *La Terre qui meurt* (Appleton-Century); Mirbeau, *Les Affaires sont les Affaires* (Appleton-Century); *French Poetry* (Dent); Mesnard, *Review of French Grammar* (Harper).

The oral examination will be held during the term in March and October. Students, in order to be credited with this course,

must satisfy the oral requirements at the University, either during the term or at the Summer School.

Monday, Wednesday, and Friday at 10.

Tuesday, Thursday, and Saturday at 10.

Professors Evans, Tirol, Fauconnier and Mr. Ogier.

FRENCH 3. THIRD YEAR PASS.

French Poetry (Dent); Molière, *Le Bourgeois gentilhomme* (Ginn); Loti, *Pêcheur d'Islande* (Holt); Rostand, *Cyrano de Bergerac* (Holt); Galland and Cros, *Nineteenth Century French Prose* (Appleton-Century); Ritchie and Moore, *Junior Manual of French Composition* (Cambridge Univ. Press).

Tuesday, Thursday, and Saturday at 10.

Mr. Ogier.

FRENCH 10. LANGUAGE; HISTORY AND INSTITUTIONS.

Cattanès and Robert, *Promenades historiques et littéraires* (Harcourt, Brace); Chinard, *Scènes de la vie française* (Ginn); Ritchie, *New Manual of French Composition* (C.U.P.); Mansion, *Grammar of Present-Day French*, and *Exercises in French Syntax* (Harrap).

Monday, Wednesday, Friday at 11.

Professor Fauconnier.

FRENCH 11. LANGUAGE; HISTORY OF THE LANGUAGE.

(Prerequisite, French 10.)

V. Hugo, *Extraits (Prose)* (Delagrave); *French Plays of the 19th century* (Harper); Henning, *French lyrics of the 19th century* (Ginn); Galland and Cros, *Nineteenth Century French Prose* (Appleton-Century); Paton, *Manual of Old French* (Nelson); Ritchie, *New Manual of French Composition* (C.U.P.); Mansion, *Grammar of Present Day French*, and *Exercises in French Syntax* (Harrap).

Monday, Wednesday, Friday at 9.

Professor Tirol.

FRENCH 14. SURVEY OF FRENCH LITERATURE.

Steinhauer and Walter, *Omnibus of French Literature*, vols. I and II (Macmillan).

Monday, Wednesday and Friday at 10.

Professor Evans.

FRENCH 20. SEVENTEENTH CENTURY LITERATURE.

Bagley, *An Introduction to French literature of the Seventeenth Century* (Appleton-Century). Corneille, *Cinna*; Molière, *Les Femmes Savantes*; Racine, *Britannicus*, *Phèdre*; Mme. de la Fayette, *La Princesse de Clèves* (All Classiques Larousse).

Tuesday, Thursday, and Saturday at 11.

Professor Evans.

FRENCH 21. EIGHTEENTH CENTURY LITERATURE.

Fellows and Torrey, *The Age of Enlightenment* (Crofts); Lesage, *Turcaret* (Cambridge); Voltaire, *Zaïre* (Vaubour-dolle), *Candide* (Prentice-Hall); Prévost, *Manon Lescaut* (Larousse); Rousseau, *Confessions* (Holt); Beaumarchais, *Le Mariage de Figaro* (Larousse, 2 vol.).

Hours to be arranged.

Professor Fauconnier.

FRENCH 23. NINETEENTH CENTURY; ADVANCED PROSE COMPOSITION.

Flaubert, *Trois Contes* (Nelson); A. France, *Le Crime de Sylvestre Bonnard* (Ed. Wright, Holt); A. Fournier, *Le Grand Meaulnes* (Ed. Dunn, Oxford); *French Plays of the 19th Century* (Harper); Henning, *French Lyrics of the 19th Century* (Ginn); Cros and Galland, *Nineteenth Century French Prose* (Appleton-Century); Ritchie, *New Manual of French Composition* (C.U.P.); Mansion, *Grammar of Present Day French*, and *Exercises in French Syntax* (Harrap).

Tuesday, Thursday, and Saturday at 11.

Professor Tirol.

FRENCH 25. SIXTEENTH CENTURY LITERATURE.

Evans and Jones, *Prose and Verse Selections from Sixteenth Century French Authors* (Crofts).

Monday, Wednesday and Friday at 11.

Professor Evans.

READING COURSES IN FRENCH

R 1. *Le Roman Canadien-Français.*

Ph.A. de Gaspé, *Les Anciens Canadiens*; A. Gérin-Lajoie, *Jean Rivard, défricheur*; J. Marmette, *François de Bienville*; L. Desrosiers, *Les Engagés du Grand Portage*; R. de Roquebrune,

Les Habits Rouges; Aloné de Lestres, *L'Appel de la Race*; H. Grignon, *Un homme et son péché*; A. Savard, *Menaud, Maître-Draveur*; H. Lémelin, *Au Pied de la Pente Douce*; Mme. Guévremont, *Le Survenant*; Gabrielle Roy, *Bonheur d'Occasion*.

Professor Tirol.

R 2. *The Nineteenth Century Novel.*

V. Hugo, *Notre Dame de Paris*; Stendhal, *Le Rouge et le Noir*; Balzac, *Eugénie Grandet*; Flaubert, *Madame Bovary*; V. Hugo, *Les Misérables*; Goncourt, *Manette Salomon*; Zola, *La Fortune des Rougon*, *Le Roman expérimental*; Daudet, *Le Nabab*; Maupassant, *Pierre et Jean*; A. France, *L'Orme du Mail*.

Professor Evans.

R 3. *La pensée française.*

Montaigne, *Essais*; Descartes, *Discours de la Méthode*; Pascal, *Pensées*; Malebranche, *De la recherche de la Vérité*, livre 1; Voltaire, *Lettres philosophiques*; J. J. Rousseau, *Contrat Social*, *Profession de foi du vicaire savoyard*; A. Comte, *Cours de philosophie positiviste*, leçons 1 et 2; Taine, *Introduction à l'histoire de la littérature anglaise*; Bergson, *Le Rire*; Sartre, *Chemins de la Liberté*.

Professor Fauconnier.

GRADUATE COURSES

Seminar courses: 110, 120, 121 and 122.

Directed Special Studies to be determined upon consideration of the candidate's previous Course.

FRENCH 110. OLD FRENCH	Professor Evans.
FRENCH 120. FRENCH-CANADIAN LITERATURE	Professor Tirol.
FRENCH 121. THE LITERATURE OF THE TWENTIETH CENTURY	Professor Tirol.
FRENCH 122. SPECIAL SUBJECT	

GEOLOGY

EMERITUS PROFESSOR AND CURATOR OF THE MUSEUM — M. B. Baker, B.A., B.Sc., LL.D., F.R.S.C., F.G.S.A.

MILLER MEMORIAL RESEARCH PROFESSOR — E. L. Bruce, B.Sc., M.A., Ph.D., F.R.S.C., F.G.S.A.

PROFESSOR — B. Rose, B.Sc., Ph.D., F.R.S.C., F.G.S.A.

PROFESSOR—J. W. Ambrose, B.A., Ph.D., F.R.S.C., F.G.S.A.

ASSISTANT PROFESSOR—R. D. Macdonald, B.Sc., M.Sc., M.A.,
Ph.D.

TUTOR—K. A. Phillips, B.A.

ASSISTANTS—M. E. Hriskevich, B.Sc., D. G. Crosby, B.Sc.,
J. McGlynn, B.Sc., W. Stubbins, B.Sc., J. Koski, B.Sc.

REGULATIONS AND ANNOUNCEMENTS

1. Mineralogy 1 is prerequisite to Geology 10b and 11. Mineralogy 10a is prerequisite to Geology 10b. Geology 1 and 11 are prerequisites to Geology courses numbered 13, 15, 17, 18, 19.

2. Students selecting Geology as one of the chief subjects on a Pass Course take Geology 1, 11, and Mineralogy 1.

If Mineralogy is being counted under another group the third course is Mineralogy 10a and Geology 10b.

3. For information in regard to Scholarships in Geology see page 77.

4. The Honours Course in Geology.

Candidates planning to take the Honours Course in Geology are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, Chemistry and a language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows:

- (i) Geology 1, 10b, 11, 13, 14, 15, 17a, Mathematics 2, and Mineralogy 1, 10a, 11, 14a when the Minor is in Chemistry;
Two reading courses, Geology R1, R2, or R3, or
- (ii) Geology 1, 10b, 11, 13, 14, 15, 17a, Mathematics 2, and Chemistry 2, 10, 14 when the Minor is in Mineralogy;
Two reading courses, Geology R1, R2, or R3, or
- (iii) Geology 1, 10b, 11, 13, 18, 19, Mineralogy 1, 10a, Chemistry 2, 10, 12 when the Minor is in Biology;
Two reading courses, Geology R1, R3 or R4.

Note: The Major prescriptions outlined can be taken only with the Minor assigned.

(b) The Minor

The Minor in Chemistry is made up as follows: Chemistry 2, 10, 13 and 14.

The Minor in Mineralogy is made up as follows: Mineralogy 1, 10a, 10b, 11, 12, 13.

The Minor in Biology is made up as follows: Biology 10, 16 plus two courses selected with the advice of the Head of the Department of Biology.

- (c) Compulsory general courses to complete the work for degree. English 2, Philosophy 1. When the Minor is Mineralogy candidates will take Philosophy 1 in place of a second reading course. If the candidate did not offer a Grade XIII language on admission he must take a language in place of one of the reading courses.

- (d) Two general examinations in the Major subject.

5. For admission to an Honours Course in Geology a student must make at least sixty-two per cent in Mineralogy 1, and in Geology 1.

6. The Minor in Geology is made up as follows: with Chemistry as Major, Geology 1, Mineralogy 1, 10a, Geology 10b, 11, 15; with Mineralogy as Major, Geology 1, 10b, 11, 13, 14, Geology 17a.

COURSES OF INSTRUCTION

GEOLOGY 1. INTRODUCTORY COURSE IN PHYSIOGRAPHY AND GENERAL GEOLOGY.

The lectures will deal with external and internal geological processes, and their results; an outline of the history of the earth; fossils and their uses. This course will prove valuable to students who contemplate teaching Geography in schools.

The lectures are illustrated by maps, models, lantern slides, and specimens.

LABORATORY WORK will consist of the examination of typical specimens of fossils, hand specimens of the more common rocks and minerals; together with the interpretation of geological maps, and types of topography. The laboratory work will also include field trips. It is therefore necessary that students should select their laboratory section on an afternoon on which they have no other laboratory period.

Text-book: *Outlines of Geology*, Longwell, Knopf, Flint, Schuchert and Dunbar (John Wiley & Sons).

Lectures—Monday and Wednesday at 11 or Tuesday and Thursday at 11.

Laboratory—Tuesday 1.30-3.30, or Wednesday 1.30-3.30.

Professor Rose.

GEOLOGY 10b. PETROGRAPHY.

This course is essentially on igneous geology and petrography, and on the determination of the more common rocks and rock minerals by both field and microscopic tests. Some attention will be paid to the sedimentary and metamorphic rocks. The lectures will be supplemented by laboratory work on hand specimens and rock slices. Mineralogy 10a and Geology 1 are prerequisite to Geology 10b.

Text-book:

Pirsson and Knopf, *Rocks and Rock Minerals*.

Lectures—Tuesday and Thursday at 10.

Laboratory—Thursday, 1.30-3.30 or 3.30-5.30.

Professor Ambrose.

GEOLOGY 11. STRUCTURAL GEOLOGY, AND PHYSIOGRAPHY.

Inherent and imposed structures in sedimentary, igneous, and metamorphic rocks, with particular attention to sedimentation, faulting, folding and shearing.

Topography using structure as a basis of interpretation. Physiographic cycles, under normal, arid, glacial, karst and marine conditions. The interpretation of topographic and geologic maps. Illustrations from Canadian occurrences where possible.

Text-books:

Nevin, *Structural Geology*. Platt, *Geological Map Exercises*.

Lectures—Monday and Wednesday at 9.

Laboratory—Friday, 8-10.

Professor Rose.

GEOLOGY 13. HISTORICAL GEOLOGY.

Continental evolution and development of geologic life with special reference to North America.

Text-book:

Dunbar, *Historical Geology*.

Lectures—Tuesday and Thursday at 9.

Laboratory—Monday, 2.30-4.30.

Professor Rose.

GEOLOGY 14. PETROLOGY.

A course of lectures will be given on the classification of igneous, sedimentary, and metamorphic rocks. Considerable attention will be given to the genesis of rock types, and to the physico-chemical conditions effective in the generation and differentiation of magmas.

Problems of correlation of rocks by means of heavy accessories will be discussed. Laboratory work will consist of the study of rock suites, determination of mineral composition by petrographic methods and mineral separation by the use of heavy liquids, etc.

Lectures—Tuesday and Thursday at 10.

Laboratory—Section 1, Tuesday, 1.30-3.30.

Section 2, 3.30-5.30.

Professor Ambrose.

GEOLOGY 15. ECONOMIC GEOLOGY AND GEOLOGY OF CANADA.

The work in this class consists of the discussion of the principles of mineral formation and description of deposits of metallic and non-metallic minerals, both Canadian and foreign, that illustrate these principles. The distribution, age and structure of the chief rock formations in Canada forms the background of the discussion of mineral deposits.

Reference books:

Bruce, *Mineral Deposits of the Canadian Shield* (The Macmillan Company); Lindgren, *Mineral Deposits; Publications of the Geological Survey, Ontario Dept. of Mines and Quebec Dept. of Mines.*

Lectures—Monday and Tuesday at 11.

Wednesday at 8.

Professor Bruce.
Professor Macdonald.

GEOLOGY 17a. FIELD GEOLOGY.

Prerequisites—Geol. 1, 10b, 11.

The field work of this course should be taken at the end of the penultimate year.

Field work consists of a systematic geological survey of a selected area in southeastern Ontario. Unless otherwise announced headquarters for the survey camp will be Queen's Biological Station on Lake Opinicon. Students live at the camp and complete their field work during the ten days following spring examinations (dates to be announced). Each student plots the survey

data and prepares a contoured geological map to scale, together with a geological report on the area studied during the fall term following.

Reference Book: *Field Geology*.

Lectures and Laboratory—Monday, 1.30-4.30, first term.

Prerequisites—Geology 1, Mineralogy 1, Mineralogy 10a, Geology 10b, and Geology 11.

Professor Macdonald.

GEOLOGY 18. SYSTEMATIC PALEONTOLOGY.

Fossils, their classification and identification.

Professor Rose.

GEOLOGY 19. STRATIGRAPHY.

Interpretation of sediments and sedimentary processes; the geologic and geographic distribution of fossils.

Lectures and Laboratory—to be arranged with the class.

Professor Rose.

GEOLOGY 20b. GEOPHYSICAL PROSPECTING.

A course of lectures is given on methods of geophysical prospecting, including magnetic, electrical, seismic, and gravimetric methods and methods dependent upon radioactivity of rocks and minerals. Emphasis is placed on applications to particular problems in geology, and on interpretation of results by the geologist.

Students are given the opportunity of using the instruments in the laboratory and making test geophysical surveys.

Reference Books: Eve and Keys, *Applied Geophysics in the Search for Minerals*; Heiland, *Geophysical Exploration*.

Lectures and Laboratory—Monday 1.30-5.30.

Prerequisites—Geology 1, Mineralogy 1.

Professor Macdonald.

READING COURSES IN GEOLOGY:

*Books marked thus must be purchased by the student for himself.

R 1. History of the Progress of Geology.

*Agar, Flint and Longwell, *Geology from Original Sources*.

*Willis and Salisbury, *Outlines of Geologic History* (University of Chicago Press). *Source Book in Geology, Mather and Mason (McGraw-Hill). Geikie, *The Founders of Geology*. Adams, *The Birth and Development of Geologic Science*.

R 2. Magmas and their Behaviour.

*Tyrrell, *The Principles of Petrology* (Dutton, New York). *Daly, *Igneous Rocks and the Depths of the Earth* (McGraw-Hill). Urbana, Ill. Rastall, *Geological Magazine*, Vol. LVII, p. 290. Origin of Granites: Geological Society of America. Memoir 28. Balk, *Structural Behaviour of Igneous Rocks*, Geol. Society of America. Memoir 5, Harker, *Petrology for Students* (Cambridge Press). Shand, *Intrusive Rocks*.

R 3. A satisfactory report of geological field work done by the student, with a knowledge of the literature of the area involved, will be accepted for R 2. Otherwise, a second reading course will be assigned the individual student who has not had opportunity to do field work.

R 4. The development of organisms in relation to Physical Geology.

Lull, *Evolution of the Earth and its Inhabitants*.

Coleman, *The Last Million Years*.

Snider, *Earth History*.

Scott, *Some Memories of a Paleontologist*.

Flett, *The Geological Survey*.

Raymond, *Prehistoric Life*.

Romer, *Man and Vertebrates*.

Seward, *Plant Life Through the Ages*.

GRADUATE COURSES

These courses are open only to graduate students.

Field excursions are required for all these courses.

Geology 113. Principles of Pre-Cambrian Geology. The origin, history and distribution of the rocks older than the Cambrian. Special attention will be given to the Canadian pre-Cambrian areas. The course will be offered in 1949-50.

Prerequisites—Graduation with at least 2nd class honours with Geology as a major subject.

Lectures—Monday and Wednesday at 11.

Laboratory—Monday, 1.30-4.30.

Professor Bruce.

Geology 114. Advanced Structural and Metamorphic Geology. A study of the changes that rocks undergo. Special attention will be paid to the origin of gneisses and schists. The course will be offered in 1949-50.

Prerequisites—As in Geology 113.

Lectures—Tuesday and Thursday at 11.

Laboratory—Tuesday or Thursday 1.30-4.30.

Professor Ambrose.

Geology 115. Pre-Cambrian Ore Deposits. Discussion of ore deposits in Pre-Cambrian rocks with especial reference to those in Canada. The genesis and character of the deposits will be studied in detail.

This course will not be offered in 1949-50. Prerequisite as in Geology 113.

Text-book:

Bruce, *Mineral Deposits of the Canadian Shield* (The Macmillan Co.).

Lectures—Wednesday and Friday at 10.

Laboratory—Tuesday, 1.30-4.30, or Friday, 1.30-4.30.

Geology 119. Regional Geology—a study of the general geology of selected regions to illustrate geological processes and to correlate the stratigraphic and diastrophic history of the world.

Periods to be arranged.

Professor Rose.

Seminar: A seminar for graduate students meets every two weeks for discussion of geological literature. Attendance is voluntary and no formal registration is required.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR—Hilda C. Laird, B.A., B.L.S., Ph.D.

LECTURER—C. A. Bentley, Ph.D.

TUTOR—F. Friesen.

REGULATIONS AND ANNOUNCEMENTS

1. German A may be counted towards a Pass degree or as an optional course towards an Honours degree. It may not be counted towards a Major or Minor in German. Students who enter the University without Matriculation in German and who wish to specialize in this subject may complete their programme of work in the usual time by taking German A during their first winter session and German 1 in the following summer.

2. Students offering German as one of the three main subjects on the Pass Course should take German 1, 2, and 10 or A, 1 and 2, if not matriculated in German, or if they have Grade XIII standing in German,

2, 10 and one further Honours course. Additional courses in German may be taken by Pass students with the consent of the Department.

3. The Honours Course in German.

Candidates planning to take the Honours Course in German are advised to offer Grade XIII subjects as follows: English, Latin, German, French and a science. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack. (See regulation 1, above).

(a) The Major

The Major is made up as follows: German 2, 10, 25b, and four other Honours courses with one supporting course either Latin 2 or Philosophy 10 and one supporting half course, either English 14a or a half course in Philosophy to be selected in consultation with the Head of the Department. Three reading courses: German R1, R2, R3.

(b) The Minor.

The Minor may be taken in Latin, French, Spanish, English, History, Economics or Philosophy. The prescribed courses may be found under the Departmental prescription of the subject selected as the Minor.

(c) Compulsory general courses to complete the work for a degree: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science he may use the third general course as a free option.

(d) Two general examinations in the Major subject.

4. A Minor in German will normally consist of German 2, 10, and two further Honours courses.

5. *High School Teaching Certificate in French and German.*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in French and German at the Ontario College of Education take for degree:

Six lecture courses in German: 2, 10, 14a, 15, 16, 18, 22b.

Six lecture courses in French (see page 156).

German Reading Courses 1 and 2 and a reading course in French, or

German Reading Course 1 and two reading courses in French,

Compulsory general courses to complete the work for degree: English 2, Latin 2, Philosophy 1. If the candidate did not offer a Grade XIII science on admission he must take a course in science in place of one of the reading courses in the special subject in which two reading courses are normally required.

One general examination in each of French and German.

6. Students offering German for the General Honours Course take the Minor as prescribed in 4 with a Reading course.

7. Students taking Honours in German are advised to read during the summer vacation as many as possible of the texts prescribed for the courses in which they intend to register during the following winter.

8. For information in regard to Scholarships in German, see page 69.

9. Students should provide themselves at once with a dictionary, at first James' or Cassell's English-German Dictionary, then an all German one, such as Hoffman's *Wörterbuch der deutschen Sprache* or *Der Sprach-Brockhaus*.

MASTERPIECES OF FRENCH AND GERMAN FICTION IN TRANSLATION.

Prerequisite, English 2.

Not offered in 1949-50.

GERMAN A. PREPARATORY GERMAN.

This course is intended to meet the needs of students who enter the University with little or no knowledge of German. The work comprises drill on pronunciation, a study of the elements of grammar, the reading of easy literature, oral and written composition.

Text-books:—

Evans and Röseler, *Shorter College German*; 2nd ed. (Crofts); Goedsche, *Sags auf deutsch!* (Crofts); *Jugendpost*, A Periodical for students of German.

Tuesday, Thursday, Saturday at 10, and one additional afternoon hour.

Professor Laird.

GERMAN 1. FIRST YEAR GERMAN.

The work includes the reading of texts, a more advanced study of grammar and syntax (including written and oral exercises),

memorizing of poems, writing from dictation, translation at sight, composition and oral practice.

Text-books:—

Chiles, *German Composition and Conversation* (Ginn); Kästner, *Drei Männer im Schnee* (Crofts); Rehder and Twaddell, *German Area Readings* (Holt); Bruns, *A Book of German Lyrics* (Heath).

Monday, Wednesday, and Friday at 11.

Dr. Bentley.

GERMAN 2. SECOND YEAR GERMAN.

The work consists of a more intensive study of modern literature, both prose and verse, oral and written composition, and a more advanced study of grammar and syntax. Extramural students, in order to be credited with this course, must satisfy the oral requirements.

Text-books:—

Cochran, *A Practical German Review Grammar* (Prentice-Hall); Diamond and Uhlendorf, *Mitten im Leben* (Holt); Meyer, *Gustav Adolfs Page* (Holt); Remarque, *Drei Kameraden* (American Book Co.); Schiller, *William Tell* (Holt); Kany and Sachs, *Advanced German Conversation* (Heath).

Monday, Wednesday, and Friday at 10,
and two practice hours.

Professor Laird.

GERMAN 10. AN INTRODUCTION TO HONOURS IN GERMAN.

This course is open to both Pass and Honours students. It should be the first Honours course taken. Students taking a Major in German may register in courses 2 and 10 in the same year.

Text-books.—

Clarke and Murray, *A Grammar of the German Language* (Cambridge); Geissendoerfer and Kurtz, *Deutsche Meister-novellen* (Prentice-Hall); Hebbel, *Agnes Bernauer* (Oxford); Schiller, *Jungfrau von Orleans* (Ginn); Bithell, *An Anthology of German Poetry 1880-1940* (Methuen).

Extramural students are advised to purchase also:

Purdie, *F. Hebbel: A Study of his Life and Works* (Oxford); Harris, *The Nature of English Poetry* (Dent); Hastings,

Studies in German Words and their Uses (Heath); *Leather, Common Errors in German* (Dent).

Monday, Wednesday and Friday at 2.30.

Professor Laird and Dr. Bentley.

GERMAN 14a. LESSING.

Text-books:—

Lessing, *Minna von Barnhelm* (Holt); *Laokoon* (Holt); *Ham-burgische Dramaturgie* (Holt); *Emilie Galotti* (Heath); *Nathan der Weise* (Ginn).

Not offered in 1949-50.

GERMAN 15. THE AGE OF GOETHE, 1770-1800.

Text-books:—

Schiller, *Die Räuber* (Sauerländer); *Kabale und Liebe* (Holt); *Don Carlos* (Oxford); *Wallenstein* (Holt); *Maria Stuart* (Holt); Goethe, *Poems* (Crofts); *Götz von Berlichingen* (Ginn); *Die Leiden des jungen Werther* (Oxford); *Egmont* (Ginn); *Iphigenie auf Tauris* (Holt); *Torquato Tasso*.

Not offered in 1949-50.

GERMAN 16. THE AGE OF GOETHE, 1800-1830.

Text-books:—

Goethe, *Faust I and II*, ed. Calvin Thomas (Heath); Borchardt, *Goethe über seinen Faust* (Insel); Petsch, *Doktor Johannes Faust, Puppenspiele* (Reclam 6378-9); Goethe, *Novelle* (Parnass); Brentano, *Kasperl und Annerl* (Parnass); Eichendorff, *Aus dem Leben eines Taugenichts* (Parnass); Fouqué, *Undine* (American Book Co.); Tieck, *Der blonde Eckbert* (Appleton-Century); Silz, *German Romantic Lyrics* (Harvard).

Tuesday, Thursday and Saturday at 10..

Dr. Bentley.

GERMAN 18. NINETEENTH CENTURY GERMAN DRAMA.

ADVANCED GERMAN COMPOSITION.

Text-books:—

Campbell, *German Plays of the Nineteenth Century* (Crofts); Hauptmann, *Die Weber* (Prentice-Hall); and one modern German drama. Clarke and Murray, *A Grammar of the*

German Language (Cambridge); Mann, *Selected Essays* (Crofts); Puckett, *Contemporary German Prose* (Holt).

Tuesday, Thursday, and Saturday at 9.

Professor Laird.

GERMAN 24b. ADVANCED GERMAN COMPOSITION.

Lange, *Deutsche Briefe* (Crofts); Clarke and Murray, *A Grammar of the German Language* (Cambridge); Steinhauer, *Die deutsche Novelle, 1880-1933* (Norton).

(Not offered in 1949-50.)

GERMAN 25b. MIDDLE HIGH GERMAN.

Text-book:—

Senn, *Introduction to Middle High German* (Norton).

READING COURSES IN GERMAN:

A general knowledge of the development of German literature during the periods covered by the courses R 2 and R 3 will be required, as well as first-hand knowledge of the text-books prescribed.

R 1. DEUTSCHE GESCHICHTE.

A general knowledge of German history will be required as well as familiarity with the prescribed texts.

Text-books:

Pinnow, *Deutsche Geschichte*; Ronge, *Tacitus' Germania und die wichtigsten antiken Stellen über Deutschland* (Read chaps. 1-27 of *Germania* only). Steinhausen, *Geschichte der deutschen Kultur*, chaps. VI and VII; Treitschke, *Deutsche Geschichte im 19. Jahrhundert*, 'Einleitung' only. Bruford, *Germany in the 18th Century*; Henry Crabb Robinson, *Diary, Reminiscences and Correspondence*, chaps. 5-9; Brandenburg, *Die deutsche Revolution 1848*; Gooch, *Germany*; Ranke, *Deutsche Männer* (Insel 225); Spengler, *Der Untergang des Abendlandes*, 'Einleitung' only.

Reference Works:—

Bithell, *Germany, A Companion to German Studies*. Spruner-Menke, *Hand-Atlas für die Geschichte des Mittelalters und der neueren Zeit*. Robertson and Bartholomew, *Historical Atlas of Modern Europe*. Pagel, *Deutsche Geschichte in Bildern. Menschen der Zeit* (Blaue Bücher, Langewiesche). Chodowiecki, *Von Berlin nach Danzig*.

R 2. DER REALISMUS IN DEUTSCHLAND.

Text-books:—

Droste-Hülshoff, *Die Judenbuche*. Gottfried Keller, *Der Landvogt von Greifensee* (Blackwell). Karl Immermann, *Der Oberhof*. Theodor Storm, *Der Schimmelreiter* (Ginn). Paul Heyse, *L'Arrabiata* (Heath). Otto Ludwig, *Zwischen Himmel und Erde* (Heath). Wilhelm Raabe, *Die Chronik der Sperlingsgasse*. Gustav Freytag, *Die Brüder vom deutschen Haus*. Theodor Fontane, *L'Adultera*. C. F. Meyer, *Der Heilige* (Holt).

References:—

J. G. Robertson, *A History of German Literature*. Hugo Bieber, *Der Kampf um die Tradition*. R. M. Meyer, *Literatur des 19. Jahrhunderts*. E. K. Bennett, *A History of the German "Novelle"*.

R 3. DEUTSCHE LITERATUR VOM NATURALISMUS BIS ZUR GEGENWART.

Text-books:—

Hermann Sudermann, *Frau Sorge* (Holt). Gerhart Hauptmann, *Florian Geyer* (Fischer). Gerhart Hauptmann, *Der Biberpelz*. Hugo von Hofmannsthal, *Der Tor und der Tod* (Insel 28).

Thomas Mann, *Die Buddenbrooks* (Fischer). Hermann Hesse, *Unterm Rad* (Fischer). M. Sommerfeld, *George, Hofmannsthal, Rilke* (Norton). Georg Kaiser, *Die Bürger von Calais*. Leonhard Frank, *Die Ursache* (Fischer). Wiechert, *Die Magd des Jürgen Doskocil*; Jünger, *Auf den Marmorklippen*.

References:—

Jethro Bithell, *Modern German Literature, 1880-1938*. Paul Fechter, *Deutsche Dichtung der Gegenwart*. Hans Naumann, *Die deutsche Dichtung der Gegenwart*. Wolfgang Stammler, *Deutsche Literatur vom Naturalismus bis zur Gegenwart*.

GRADUATE COURSES

Lecture courses and Directed Special Studies will be arranged for by the Department as needed. The following lecture courses are obligatory:

GERMAN 101a. GESCHICHTE DER DEUTSCHEN SPRACHE.

Text-books:

Kirk, *Introduction to the Historical Study of New High German* (Manchester University Press). Braune, *Abriss der alt-hochdeutschen Grammatik* (Niemeyer).

GERMAN 102b. MITTELHOCHDEUTSCH.

Text-book:

Bachmann, *Mittelhochdeutsches Lesebuch* (Beer).

GREEK AND ROMAN HISTORY, SEE CLASSICS.

GREEK LANGUAGE AND LITERATURE, SEE CLASSICS.

HEBREW LANGUAGE AND LITERATURE

PROFESSOR—Rev. H. A. Kent, E.D., M.A., D.D., LL.D., F.R.S.A.,
F.A.G.S.ASSISTANT PROFESSOR—Rev. S. MacLean Gilmour, B.A., B.D., Ph.D.,
D.D.

REGULATIONS AND ANNOUNCEMENTS

Students proceeding to Theology may, with the permission of the Board of Studies, substitute Hebrew 1 for a course in Latin.

HEBREW 1.

The aim of this class is to enable students to read any of the narrative parts of the Hebrew Scripture. The Christmas term is devoted entirely to thorough study and practice of grammar and exercises. After the Christmas vacation parts of Genesis and Samuel, or other books, will be read, in addition to the work in grammar and composition.

Text-books: Davidson, *Hebrew Grammar* (20th or later editions), pages 1-106; Kittel, *Biblia Hebraica*, or *Hebrew Bible*, issued by B. and F. Bible Society; *Lexicons*, Brown-Driver-Briggs, or Bagster.

Tuesday, Thursday, and Friday at 2.30 p.m.

Dr. Gilmour.

HEBREW 2.

This class aims at more advanced work in the Hebrew language than that attempted in course 1. The prophetic and poetic literature of the Old Testament will be studied and lectures given on Hebrew Syntax and the principles of Textual Criticism of the Old Testament. Students will be practised regularly in

translating English into Hebrew, both viva voce and in written exercises.

Text-books: Davidson, *Hebrew Grammar*, pages 106-236, *Hebrew Syntax. Hebrew Bible and Lexicons* as in course 1.

Tuesday, Thursday, and Friday at 2.30 p.m.

Principal Kent.

HISTORY

JAMES DOUGLAS PROFESSOR OF CANADIAN AND COLONIAL HISTORY—

Reginald G. Trotter, M.A., Ph.D., D.C.L., F.R.Hist.S., F.R.S.C.
(on leave 1949-50).

PROFESSOR—W. E. C. Harrison, O.B.E., M.A.

PROFESSOR—A. R. M. Lower, M.A., Ph.D., F.R.S.C.

ASSISTANT PROFESSOR—W. E. L. Smith, M.C., M.A., Ph.D.

LECTURER—Gordon Frazer, M.A. (Session 1949-50).

DUNCAN MCARTHUR MEMORIAL FELLOW—M. Helen McMahon, B.A.
(Session 1948-49).

SIR JAMES AIKINS FELLOW—Earle S. Thomas, B.A. (Session 1948-49).

WESTERN ONTARIO GRADUATES FELLOW—Robert D. Lymburner, B.A.
.. (Session 1948-49).

REGULATIONS AND ANNOUNCEMENTS

1. In all courses in history a knowledge of historical geography is required. In addition to the atlases prescribed in individual courses the following is recommended as the most convenient general historical atlas: Ramsay Muir and George Philip, *Philip's Historical Atlas, Mediæval and Modern* (at present out of print). A briefer work is *Muir's New School Atlas of Universal History* (Clarke, Irwin).

All students taking courses in History are referred to Dorothy Blakey and A. C. Cooke, *The Preparation of Term Essays* (University of British Columbia).

2. Students selecting History as one of the special subjects for a Pass degree take History 3, 5 and 6. If they wish a fourth course in History they are recommended to take History 4. Students whose work in the Pass courses in History is satisfactory may take also one or more of History 11, 12, 13, 20 and 24. In exceptional cases Pass students with a sufficiently high standing in History may, with the permission of the Department, be admitted to History 27 or 28 in their final year.

3. The Honours Course in History.

Candidates planning to take the Honours Course in History are advised to offer Grade XIII subjects as follows: English, Latin or Mathematics, History, a language and a science. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree courses so as to include the subjects that they lack. If they do not offer History as a subject of Grade XIII they will take History 6.

Candidates offering History as a subject of Grade XIII with a grade not lower than B and intending to apply for admission to Honours with History as Major or Minor may, in their first year, take History 12 concurrently with History 3. For such students a normal first year programme is English 2, Philosophy 1, History 3 and 12, and a course in the Minor.

Honours in History may be taken either in British and European History or in British and Colonial History.

A. British and European History.

(a) The Major

The Major is made up as follows: History 3, 12, 13, 18a, 18b, 19, and two of 11, 16, 24, 27, with one supporting course, Greek and Roman History 4 or Latin 2.

Three reading courses chosen from R1, R3, R4, R5, R6. Subject to the approval of the Department one reading course may be selected from those offered in the Minor subject.

(b) The Minor

The Minor may be taken in the following subjects: English, French, Greek and Roman History, Philosophy, or Political and Economic Science.

(c) Compulsory general courses to complete the work for a degree: Philosophy 1, English 2, a science or a language. If the candidate has Grade XIII standing in both a language and a science he may use the third general course as a free option.

B. British and Colonial History

(a) The Major

The Major is made up as follows: History 3, 12, 13, 18a, 18b, 19, 20, 28, with one supporting course, Greek and Roman History 4 or Latin 2.

Three reading courses chosen from R1, R3, R4, R5, R6. Subject to the approval of the Department one reading course may be selected from those offered in the Minor subject.

- (b) The Minor as stated in A (b).
- (c) Compulsory general courses as stated in A (c).
- (d) Two general examinations in History.

4. *High School Teaching Certificate in History.*

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in History at the Ontario College of Education take the regular Honours Course in History with a Minor in Political and Economic Science made up of Economics 4, Politics 2, Economics 10, and two further courses in Politics and Economics. Geology 1 is also prescribed, and History R5, *Geographical Discovery and Exploration*, is included among the reading courses.

5. *Minors in History.*

- (a) A Minor in History normally consists of History 3, 12 or 16, 13 or 19, and one other course numbered over 10.
- (b) Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in English at the Ontario College of Education take the regular Honours Course in English with a Minor in Social History made up as follows: History 3, 12, and two of 18, 19, 24, 28. (See *Course for the Teaching Certificate in English*, page 149.

6. *General Honours.*

Students selecting History as one of their subjects for General Honours will take the courses prescribed for a Minor in History (see 5 (a) above), with the addition of a reading course in History.

For information in regard to Scholarships in History, see page 70.

HISTORY 3. CANADIAN HISTORY.

Canadian history as a phase of the expansion of European civilization into the western hemisphere.

A. R. M. Lower, *Colony to Nation: A History of Canada* (Longmans). R. S. Cotterill, *A Short History of the Americas* (Prentice-Hall). Gerald S. Graham, *Britain and Canada* (Longmans). L. J. Burpee, *An Historical Atlas of Canada* (Nelson). Edgar W. McInnis, *Canada: A Political and Social History* (Rinehart).

Extramural students will be required to buy additional books, including Edgar McInnis, *Canada: A Political and Social His-*

DETAILS OF COURSES OF INSTRUCTION

tory (Clarke, Irwin), and A. B. Hart and H. E. Bolton, *American History Atlas* (Denoyer-Geppert Co.).

Monday, Wednesday, and Friday at 11.

Mr. Frazer.

HISTORY 4.

This course is the same as Greek and Roman History 4 and is given by the Department of Classics. For prescription see page 142.

HISTORY 5. A SURVEY OF BRITISH HISTORY.

G. M. Trevelyan, *A Shortened History of England* (Longmans).
W. E. Lunt, *History of England*, Third edition (Harper). Other reading to be assigned.

Monday, Wednesday, and Friday at 10.

Professor Lower.

HISTORY 6. EUROPEAN HISTORY.

An historical introduction to contemporary Europe.

H. A. L. Fisher, *History of Europe* (Longmans).

J. H. Robinson and J. T. Shotwell, *History of Western Europe*, (Brief edition, revised and enlarged, Ginn). J. H. Robinson, *Readings in European History*, Vols. I and II (Ginn).

J. H. Breasted, C. F. Huth, and S. B. Harding, *European Atlas* (Denoyer-Geppert Co., Chicago). Other reading to be assigned. Extramural students will be required to buy additional books.

Tuesday and Thursday at 11, Wednesday at 2.30.

Professor Lower and Professor Harrison.

HISTORY 11. UNITED STATES HISTORY.

A survey course covering the national period.

A. B. Hart and H. E. Bolton, *American History Atlas* (Denoyer-Geppert Co., Chicago). Other reading to be assigned.

Monday, Wednesday, and Friday at 11.

(Not offered in 1949-50.)

HISTORY 12. MEDIAEVAL EUROPEAN HISTORY, 400-1453.

A study of the evolution of Western civilization during this period.

Carl Stephenson, *Mediaeval History* (Harper). J. F. Scott, A. Hyma and A. H. Noyes, *Readings in Mediaeval History* (Crofts). Other reading to be assigned.

Wednesday and Friday at 10, Tuesday at 1.30.

Professor Smith.

HISTORY 13. THE DEVELOPMENT OF BRITISH COLONIAL POLICY.

J. A. Williamson, *The British Empire and Commonwealth* (Macmillan). Carl Becker, *Beginnings of the American People* (Houghton, Mifflin). R. G. Trotter, *The British Empire-Commonwealth* (Macmillan). A. B. Keith, *Speeches and Documents on the British Dominions* ("The World's Classics", Oxford University Press). Other reading to be assigned.

Monday, Wednesday, and Friday at 10.

Mr. Frazer.

HISTORY 16. MEDIAEVAL BRITISH HISTORY.

(Not offered in 1949-50.)

This course traces British progress down to 1485, emphasizing the constitutional and cultural aspects of the period.

G. M. Trevelyan, *History of England* (Longmans); G. B. Adams, *Constitutional History of England* (Holt); C. Stephenson and F. G. Marcham, *Documents of English Constitutional History*, Revised edition (Harper).

Other reading to be assigned.

Note: This course is open only to students who have been admitted to honours.

Professor Smith.

HISTORY 18a. ENGLAND UNDER THE TUDORS, 1485-1603.

C. Stephenson and F. G. Marcham, *Documents of English Constitutional History* (Harper); J. B. Black, *The Reign of Queen Elizabeth* (Oxford University Press); D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition (Macmillan); G. M. Trevelyan, *English Social History* (Longmans). Other reading to be assigned.

Note: This course is open only to students who have been admitted to honours.

Tuesday and Thursday 2.30-4.

Professor Harrison.

HISTORY 18b (Formerly History 19b). ENGLAND UNDER THE STUARTS, 1603-1714.

G. M. Trevelyan, *England Under the Stuarts* (Methuen). C. Stephenson and F. G. Marcham, *Documents of English Constitutional History* (Harper). D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition, (Macmillan). G. M. Trevelyan, *English Social History* (Longmans). Other reading to be assigned.

Note: This course is open only to students who have been admitted to honours.

Tuesday and Thursday 2.30-4.

Professor Lower.

HISTORY 19 (Formerly History 17). MODERN BRITAIN.

An historical introduction to contemporary Britain.

Gilbert Slater, *The Growth of Modern England* (Macmillan). Sir John Marriot, *Modern England, 1885-1945* (Saunders). D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition (Macmillan). G. M. Trevelyan, *English Social History* (Longmans). Other reading to be assigned.

Note: This course is open only to students who have been admitted to honours.

Monday, 2.30-4.30, and Wednesday at 9.

HISTORY 20. CANADIAN HISTORY TO 1818.

This course will attempt an explanation of French Canada in the history of Canada. A reading knowledge of French is desirable.

Collection de Cartes Anciennes et Modernes pour servir à l'étude de l'Histoire de l'Amérique et du Canada (Institut d'Histoire et de Géographie, Université Laval).

Reading to be assigned.

Tuesday, Thursday, and Saturday at 10.

Professor Lower.

HISTORY 24. THE RENAISSANCE AND THE REFORMATION.

The emphasis in lectures and discussions will be on the cultural and religious developments of the period.

Henry S. Lucas, *The Renaissance and the Reformation* (Harper). F. Schevill, *First Century of Italian Humanism* (Crofts). Other reading to be assigned.

Tuesday and Thursday at 10, Friday at 1.30.

Professor Smith.

HISTORY 27 (POLITICS 34). RECENT EUROPE.

An historical approach to the problems of contemporary Europe.

A. J. Grant and H. W. V. Temperley, *Europe in the Nineteenth and Twentieth Centuries* (Longmans).

E. Lipson, *Europe in the Nineteenth and Twentieth Centuries* (Macmillan). E. H. Carr, *The Twenty Years' Crisis, 1919-1939: An Introduction to the Study of International Relations* (Macmillan). G. M. Gathorne Hardy, *A Short History of International Affairs, 1920-1939* (Oxford University Press). E. H. Carr, *Nationalism and After* (Macmillan). Other readings to be assigned.

Monday, Wednesday, and Friday at 11.

Professor Harrison.

HISTORY 28. CANADIAN HISTORY SINCE 1818.

A seminar combining discussion of historical methods and bibliography, and problems of interpretation in Canadian history, with reports by students on selected topics.

Readings on the period will be assigned, and other material in the Queen's collection of Canadiana will be used in reports by students on selected topics.

Tuesday and Thursday at 3.30.

Professor Trotter.

READING COURSES IN HISTORY:

R 1. A Mediæval Mosaic.

G. G. Coulton, *The Mediæval Scene* (Cambridge U. P.). E. Power, *Mediæval People* (Penguin). H. Adams, *Mont-Saint-Michel and Chartres* (Houghton, Mifflin). P. Sabatier, *St. Francis* (Hodder and Stoughton). J. Huizinga, *Waning of the Middle Ages* (Arnold). H. Pirenne, *Mediæval Cities* (Princeton U. P.). C. H. Haskins, *Rise of Universities* (Holt).

R 3. British Foreign Policy to 1914.

R. W. Seton-Watson, *Britain in Europe, 1789-1914: A survey of foreign policy* (Macmillan). Sir John Tilley and Stephen Gaselee, *The Foreign Office* (Putnam). Harold Nicolson, *Diplo-*

macy (Nelson). A. F. Pribram, *England and the International Policy of the European Great Powers, 1871-1914* (Oxford University Press). G. M. Trevelyan, *Grey of Falloden* (Macmillan). Viscount Grey, *Twenty-five Years* (Hodder and Stoughton). Harold Nicolson, *Sir Arthur Nicolson: First Lord Carnock* (Macmillan). Viscount Haldane, *Autobiography* (Hodder and Stoughton). Winston Churchill, *The World Crisis, 1911-1914*, Vol. I (Scribners).

R 4. Anglo-American and Canadian-American Relations.

J. B. Brebner, *North Atlantic Triangle* (Ryerson). R. B. Mowat, *The Diplomatic Relations of Great Britain and the United States* (Longmans). L. M. Gelber, *The Rise of Anglo-American Friendship: A Study in World Politics, 1898-1906* (Oxford University Press). Edgar W. McInnis, *The Unguarded Frontier: A History of Canadian-American Relations* (McClelland and Stewart). H. L. Keenleyside, *Canada and the United States* (Crofts). P. E. Corbett, *The Settlement of Canadian-American Disputes* (Ryerson). W. B. Munro, *American Influences on Canadian Government* (Macmillan). Sir Robert Falconer, *The United States as a Neighbour* (Cambridge University Press). *Conference on Canadian-American Affairs, 1935: Proceedings*, edited by W. W. McLaren, A. B. Corey, R. G. Trotter (Ginn). (The section on "The Historical Background of Present Problems and Attitudes"). *Conference on Canadian-American Affairs, 1941: Proceedings*, edited by R. G. Trotter, A. B. Corey (Ginn) (pages 140-149, 184-194). B. K. Sandwell, *Canada and United States Neutrality*; and R. G. Trotter, *North America and the War* (Oxford Pamphlets on World Affairs). R. MacG. Dawson, *Canada in World Affairs, 1939-1941* (Oxford University Press for the Canadian Institute of International Affairs). Vincent Massey, *On Being Canadian* (Dent).

R 5. Geographical Discovery and Exploration.

J. N. L. Baker, *A History of Geographical Discovery and Exploration* (New edition, 1937, Clarke Irwin). J. E. Gillespie, *A History of Geographical Discovery, 1400-1800* (Clarke, Irwin). J. Holland Rose, *Man and the Sea: Stages in Maritime and Human Progress* (Heffer and Sons, Cambridge, England). Vilhjalmur Stefansson, *Great Adventures and Explorations* (Longmans). J. B. Brebner, *The Explorers of North America, 1492-1806* (Macmillan).

It is not expected that the student will attempt to memorize the whole mass of factual detail in Baker; but it should be carefully

read in its entirety, with attention mainly on those phases of exploration that are also illustrated in the maps.

Gillespie's brief volume will be useful as an introductory and supplementary sketch, but should not be considered as being at all a substitute for the ampler material in the other volumes named.

R 6. History and Historiography.

Encyclopaedia of the Social Sciences, Vol. VII, pp. 357-389: "History and Historiography". Allan Nevins, *The Gateway to History* (Heath). E. R. A. Seligman, *The Economic Interpretation of History* (Columbia University Press). Shailer Mathews, *The Spiritual Interpretation of History* (Harvard University Press). H. E. Baines, *History of Historical Writing* (University of Oklahoma Press). Lucy M. Salmon, *Historical Material* (Oxford University Press). G. P. Gooch, *History and Historians in the Nineteenth Century* (Longmans), (material on the following historians: Ranke, Treitschke, Michelet, Guizot, Tocqueville, Taine, Aulard, Hallam, Lingard, Macaulay, Carlyle, Froude, Stubbs, Freeman, Green, Gardiner, Lecky, Seeley, Acton, Bancroft, Maitland, Parkman). Arnold Toynbee, *A Study of History*: Abridgment of volumes I-VI, by D. C. Somerville (Oxford University Press).

GRADUATE COURSES

Directed Special Studies may be pursued and a thesis written in many aspects of Canadian History and in some phases of English and European History.

HISTORY, GREEK AND ROMAN, SEE CLASSICS.

INDUSTRIAL RELATIONS

PROFESSOR—J. C. Cameron, M.Com.

ASSOCIATE PROFESSOR—C. H. Curtis, M.A.

The Department of Industrial Relations was established in 1944 to continue the work begun by the Industrial Relations Section (a section of the School of Commerce and Administration) in 1937.

The Department

1. (a) collects data respecting policies, programmes and experience in employer-employee relations, keeps the material up-to-date and classifies it so that it is readily available to students, employers, labour organizations and governments;

- (b) collects current information in the industrial and social security fields.
2. keeps in touch with industrial and labour union organizations so that it may study actual developments.
 3. gives instruction to students in the Department of Political and Economic Science, The School of Commerce, and the Faculty of Applied Science.
 4. prepares reports on subjects of immediate and vital interest.
 5. holds conferences and short courses for business executives, personnel managers, industrial relations managers and labour leaders.

Thus the Department combines the work of a library, a clearing house of information, and a research bureau. It also participates in the University programme of instruction (intramural and extramural) and provides a centre for the discussion of recent developments.

Commerce students who wish to specialize in Industrial Relations will take the following courses offered by the Department of Political and Economic Science and the School of Commerce:

Economics 23—Industrial Relations.

Commerce 50a—Industrial Management

Commerce 51b—Personnel Management

Commerce 59—Thesis in the field of Industrial Relations

The Department is prepared to give special courses to students who wish to do advanced work in industrial relations.

For information in regard to scholarships in Industrial Relations see page 73.

For information regarding professional courses write to the Head of the Department.

LATIN LANGUAGE AND LITERATURE, SEE CLASSICS

MATHEMATICS

THE N. F. DUPUIS PROFESSOR OF MATHEMATICS—

R. L. Jeffery, M.A., Ph.D., F.R.S.C.

PROFESSOR—N. Miller, M.A., Ph.D.

ACTING PROFESSOR OF ASTRONOMY—A. Vibert Douglas, M.B.E., M.Sc., Ph.D. (McGill).

PROFESSOR—F. M. Wood, M.A., B.Sc.

ASSOCIATE PROFESSOR—I. Halperin, M.A., Ph.D.

ASSOCIATE PROFESSOR—G. L. Edgett, M.A., Ph.D.

ASSISTANT PROFESSOR—F. M. C. Goodspeed, B.Sc., M.A., Ph.D.

LECTURER—H. W. Ellis, M.A., Ph.D.

LECTURER (Session 1948-49)—R. A. Staal, M.A., Ph.D.

INSTRUCTORS—I. C. Damsteeg, B.A., J. W. Hutton, B.A.

REGULATIONS AND ANNOUNCEMENTS

1. Mathematics 1, 2, 3b and 7a, and Astronomy 1 are pass courses, and are open to all who have passed the prerequisites.

2. Students selecting Mathematics as one of the main subjects for the Pass degree ordinarily take Mathematics 2, 3b, 7a and Astronomy 1. If they maintain satisfactory standing in Mathematics 2, they may, with the consent of the Department, take Honours courses in Mathematics in place of 3b, 7a and Astronomy 1.

3. Students are advised not to attempt an Honours Course in Mathematics unless they have obtained high standing in the preceding pass course. Grade B in such a course is the minimum standing on which a student is allowed to proceed.

4. Students who have a standing of at least Grade B in Mathematics 1, or second class in the Mathematics of Honour Matriculation, and who intend to enter the Honours Course in Mathematics, should take courses 2, 10a, and 11b in the same year. They must obtain a standing of at least Grade B in these courses if they wish to proceed.

Students who have obtained credit in Mathematics 2, 10a, and 11b, and are not proceeding with the Honours Course, may count these towards a group for the Pass degree.

Students who have taken Mathematics 10a and 11b and wish to proceed to Honours must obtain through the Registrar permission to do so.

5. *High School Teaching Certificates in Mathematics, and in Mathematics and Physics or Physics and Mathematics.*

Candidates for admission to the Course leading to the Interim High School Assistant's Certificate, Type A, in Mathematics at the Ontario College of Education take the Honours Course in Mathematics with a Minor to be selected on the advice of the Department of Mathematics.

Candidates for admission to the Course leading to the Interim High School Assistant's Certificate, Type A, in Mathematics and

Physics at the Ontario College of Education take the Honours Course in Mathematics and Physics or Physics and Mathematics.

6. The Honours Course in Mathematics.

Candidates planning to take the Honours Course in Mathematics are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, a language, a fifth subject which may be a second science, a second language or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

Mathematics 2, 10a, 11b, 12a, 13, 15b, four of the courses numbered from 19 to 23, chosen on the advice of the Department. Three reading courses, Mathematics R1, R2, R3.

(b) The Minor

The Minor is usually in Physics or Economics but a candidate who wishes to take some other subject may do so with the consent of the Department of Mathematics.

(c) Compulsory general courses to complete the work for a degree. English 2, Philosophy 1, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in the Major subject.

7. The work for a major in Mathematics is normally covered in four years provided that Mathematics 1 or the Mathematics of Honour Matriculation has been taken previously. The normal distribution of the work over four years is as follows:

1st year — Mathematics 2, 10a, 11b.

2nd year — Mathematics 13, 12a, 15b, and Reading Course 1.

3rd year — Mathematics 19 and one other course, and Reading Course 2.

4th year — Mathematics 22 and one other course, and Reading Course 3.

It is advisable for the student to aim at completing the Minor subject at least one year before the time of graduation.

8. Minors in Mathematics.

When Mathematics is the Minor associated with Physics as Major, the Minor consists of Mathematics 2, 10a, 11b, 13, 19.

When Mathematics is the Minor associated with Economics as Major, the Minor consists of Mathematics 2, 10a, 11b, 13 and one of 19, 20.

9. When Mathematics is one of the three special subjects on the General Honours Course (page 104) the prescription of work is as follows: Mathematics 2, 10a, 11b, 13, 12a, 15b, Reading Course 1.

10. For information in regard to scholarships in Mathematics, see page 74.

COURSES OF INSTRUCTION

MATHEMATICS 1. TRIGONOMETRY, ANALYTIC GEOMETRY, AND ALGEBRA.

McGraw-Hill Five-place Logarithmic and Trigonometric Tables.
Other texts to be prescribed.

Tuesday, Thursday, and Saturday at 9.

Mr. Damsteeg.

MATHEMATICS 2. DIFFERENTIAL AND INTEGRAL CALCULUS.

Granville, Smith and Longley, *Elements of Differential and Integral Calculus, revised edition* (Ginn).

Prerequisite, Mathematics 1.

Monday, Wednesday, and Friday at 9.

Tuesday, Thursday, and Saturday at 10.

Professors Jeffery, Edgett and Goodspeed.

MATHEMATICS 3b. MATHEMATICAL STATISTICS.

Richardson, *An Introduction to Statistical Analysis*, revised edition (Harcourt, Brace).

Prerequisite, Mathematics 2, which may be taken concurrently.

Monday, Wednesday, and Friday at 10.

Professor Edgett and Mr. Hutton.

MATHEMATICS 7a. MATHEMATICS OF INVESTMENT.

Hart, *Mathematics of Investment*, with tables (Heath).

Prerequisite, Mathematics 1.

Monday, Wednesday, and Friday at 10.

Professor Edgett and Mr. Hutton.

ASTRONOMY 1. A COURSE IN DESCRIPTIVE ASTRONOMY.

Baker, *Astronomy* (van Nostrand), (4th ed.). Kingston, *Star Guide*.

Monday, Wednesday, and Friday at 9.

Dean Douglas.

MATHEMATICS 10a. ALGEBRA.

Prerequisite, Mathematics 1.

Rosenbach and Whitman, *College Algebra* (Ginn), supplemented by mimeographed notes.

Monday, Wednesday, and Friday at 11.

Dr. Ellis.

MATHEMATICS 11b. ANALYTIC GEOMETRY.

Sisam, *Analytic Geometry* (Holt).

Monday, Wednesday, and Friday at 11.

Professor Miller.

MATHEMATICS 12a. DETERMINANTS AND THEORY OF EQUATIONS.

Prerequisites, Mathematics 2, 10a.

Dickson, *New First Course in the Theory of Equations* (John Wiley & Sons).

Monday, Wednesday, and Friday at 8.

Professor Miller.

MATHEMATICS 13. CALCULUS AND DIFFERENTIAL EQUATIONS.

Granville, Smith and Longley, *Elements of Differential and Integral Calculus, revised edition* (Ginn); Miller, *First Course in Differential Equations* (Oxford Press).

Tuesday, Thursday, and Saturday at 8.

Professor Jeffery.

MATHEMATICS 15b. ANALYTIC SOLID GEOMETRY.

Open to students who have taken Mathematics 12a.

Somerville, *Analytical Geometry of Three Dimensions* (Cambridge University Press).

Monday, Wednesday, and Friday at 8.

Professor Halperin.

MATHEMATICS 19. ADVANCED CALCULUS.

Woods, *Advanced Calculus* (Ginn).

Tuesday, Thursday, and Saturday at 8.

Professor Miller.

MATHEMATICS 20. PROBABILITY AND STATISTICS.

Uspensky, *Introduction to Mathematical Probability* (McGraw-Hill). Hoel, *Introduction to Mathematical Statistics* (Wiley).

Tuesday, Thursday, and Saturday at 9.

Professor Edgett.

MATHEMATICS 21. ADVANCED ANALYTIC GEOMETRY.

(Not offered in 1949-50.)

MATHEMATICS 22. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE.

Osgood, *Functions of a Complex Variable* (Stechert).

Monday, Wednesday, and Friday at 9.

Professor Jeffery and Professor Wood.

MATHEMATICS 23. THE CALCULUS OF FINITE DIFFERENCES, AND LIFE CONTINGENCIES.

Freeman, Part II *Actuarial Mathematics* (The Actuarial Society of America); Fort, *Finite Differences* (Oxford University Press). Spurgeon, *Life Contingencies* (The Actuarial Society of America).

Tuesday, Thursday, and Saturday at 9.

(Not offered in 1949-50.)

Professor Edgett.

READING COURSES IN MATHEMATICS:

R 1. D. E. Smith, *Essentials of Solid Geometry* (Ginn); F. L. Griffin, *An Introduction to Spherical Trigonometry* (Houghton-Mifflin).

From his reading the student should acquire a knowledge of the theorems of the subject and skill in the solution of problems.

R 2. Courant and Robbins, *What is Mathematics?* (Oxford University Press).

R 3. H. N. Wright, *Theory of Numbers* (Wiley).

GRADUATE COURSES

Graduate courses for the degree of M.A. will be selected from the following:

MATHEMATICS 101. THEORY OF FUNCTIONS OF A REAL VARIABLE, WITH APPLICATIONS TO FOURIER SERIES AND TO FOURIER AND LAPLACE TRANSFORMS.

Professor Jeffery and Professor Goodspeed.

MATHEMATICS 103. DIFFERENTIAL GEOMETRY AND TENSOR ANALYSIS WITH APPLICATIONS TO THE THEORY OF RELATIVITY.

Eisenhart, *Differential Geometry* (Ginn).

Professor Halperin.

MATHEMATICS 108. ADVANCED MATHEMATICAL STATISTICS.

Professor Edgett.

MINERALOGY

PROFESSOR—J. E. Hawley, M.A., Ph.D., F.G.S.A., F.R.S.C.

ASSISTANT PROFESSOR—L. G. Berry, M.A., Ph.D., F.G.S.A., F.M.S.A.

ASSISTANTS—C. A. Burns, B.Sc., J. C. Gill, D. H. James, B.Sc., H. D. Carlson, C. L. Lewis, T. Podolsky.

REGULATIONS AND ANNOUNCEMENTS

1. Students taking Mineralogy 1 must have Honour Matriculation in Chemistry, or have passed in Chemistry 1.

2. Pass Course. Mineralogy 1, 10, 11 are the three courses necessary if Mineralogy is selected as one of the chief subjects on a Pass Course. For such students it is recommended that Geology and Chemistry be made the other groups for concentration.

3. The Honours Course in Mineralogy.

Candidates planning to take the Honours Course in Mineralogy are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, Chemistry and a language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: Mineralogy 1, 10a, 10b, 11, 12, 13; when the Minor is in Geology, Chemistry 2, 10, and 13; when the Minor is in Chemistry, Geology 1, 10b, 14a, 15, and Physics 2; Mathematics 2; two reading courses in Mineralogy selected from R1, R2, R3. Field work or research approved by the Department may be substituted for one of the reading courses, a thesis on the work being required.

(b) The Minor

The Minor is normally taken in Geology or Chemistry.

The Minor in Chemistry is made up as follows: Chemistry 2, 10, 13, and 14.

The Minor in Geology is made up as follows: Geology 1, 10b, 11, 13, 14 and 17a or 17b.

- (c) Compulsory general courses to complete the work for a degree. English 2, Philosophy 1. When the Minor is Geology candidates will take Philosophy 1 in place of a reading course. If the candidate did not offer a Grade XIII language on admission he must take a language in place of one of the reading courses.

- (d) Two general examinations in the Major subject.

4. A Minor in Mineralogy normally consists of Mineralogy 1, 10a, 10b, 11, 12, 13.

5. Students selecting Mineralogy as one of the special subjects on the General Honours Course take the Minor as outlined above plus a reading course in Mineralogy.

6. For admission to an Honours Course in Mineralogy a student must make 62 per cent in each of Mineralogy 1 and Geology 1. Students intending to register in this course should consult with the Department regarding the order in which the courses should be taken. Attention is called to the general regulations regarding entrance to and continuance in the Honours Courses.

7. All students in Mineralogy are expected to take part in the field excursions which are made during October and November. Students taking the Geology 1 field trips the same year as Mineralogy 1 need not repeat them for Mineralogy.

8. Each student in the Department is supplied with a locked cabinet containing about 150 mineral specimens.

MINERALOGY 1.

A course in Elementary Crystallography, Blowpipe Analysis and Descriptive and Determinative Mineralogy of about 100 common or more important minerals.

Prerequisite—Honour Matriculation Chemistry or Chemistry 1, taken concurrently.

Text-book: Hurlbut, *Dana's Manual of Mineralogy*, 15th Ed. (John Wiley and Sons, Inc., New York, 1941).

or,

Mineralogy, Kraus, Hunt and Ramsdell (McGraw-Hill, 1936). The latter is more complete and is recommended for students without much training in geology and geometry.

For students intending to continue in Mineralogy, Ford, *Dana's Text-book of Mineralogy*, 4th Edition (John Wiley and Sons, Inc., New York, 1932).

Two sections with Science Mineralogy 1.

Hours to be arranged.

Lectures—1(a), 2(b).

Laboratory—2 hours.

Professor Berry.

MINERALOGY 10a. ELEMENTS OF OPTICAL MINERALOGY.

Prerequisite—Mathematics 1 and Physics 1.

Optical properties of crystals including non-opaque minerals and chemical compounds.

Wahlstrom, *Optical Crystallography*, 1943 (Wiley).

or—

Optical Mineralogy, Rogers and Kerr (McGraw-Hill, 1942).

or—

A. N. Winchell, *Elements of Optical Mineralogy*, 5th Ed. (John Wiley and Sons, 1937).

Reference Books:

Manual of Petrographic Methods, Johannsen (McGraw-Hill, 1928).

Lectures—Monday at 10 and Friday at 10, first term.

Laboratory—Wednesday 1.30-3.30, or Saturday 10-12.

Professor Berry.

MINERALOGY 10b. PHYSICAL MINERALOGY AND CRYSTALLOGRAPHY.

An advanced course in the character of crystals, crystal measurements and crystal drawing.

Prerequisites—Mineralogy 1, Physics 1, Mathematics 1.

Text-books—Dana, *Text-book of Mineralogy*, 1932 (Wiley), or Phillips, *An Introduction to Crystallography*, 1946 (Longmans).

Books of Reference—Bragg, *X-rays and Crystal Structure*, 4th Edit.; Evans, *Crystal Chemistry* (Cambridge Univ. Press), 1939; Bunn, *Chemical Crystallography* (Oxford), 1946.

Lectures—Monday at 10, Friday at 11, second term.

Laboratory—Saturday 9-11, second term.

Professor Berry.

MINERALOGY 11. DESCRIPTIVE AND DETERMINATIVE MINERALOGY.

The properties, occurrences, valuation, and uses of ore and other important minerals, and their determination by blowpipe and microchemical methods.

Prerequisites—Mineralogy 1 and 10a; students on an Honours Course may take 10a and 11 at the same time.

Text-books:

Dana's Text-book of Mineralogy, Ford, 4th Ed. (John Wiley and Sons), and choice of

Economic Mineral Deposits, Bateman (McGraw-Hill, 1942), or *Mineral Deposits*, Lindgren (McGraw-Hill, 1933).

Lectures—First term, Tuesday at 11 and Thursday at 8; second term, Tuesday at 8 and Friday at 10.

Laboratory—Wednesday, 1.30-3.30, or 3.30-5.30 (two sections).

Professor Hawley.

MINERALOGY 12. NON-METALLIC MINERALS AND THEIR TECHNOLOGY.

A study of (1) the optic properties of the feldspars and other rock-forming minerals, (2) the occurrence and utilization of non-metallic minerals.

Prerequisite—Honour standing in Mineralogy 10a and b.

Text-book:

A. N. Winchell, *Elements of Optical Mineralogy*, Part II, 3rd Edition (Wiley and Sons, 1933).

Reference Books:

Publications of: Geological Survey of Canada, Mines Branch,
Dept. of Mines, Canada; U.S. Geological Survey.

R. B. Ladoo, *Non-Metallic Minerals* (McGraw-Hill, 1925).

Industrial Minerals and Rocks, A.I.M.E. (New York, 1937).

*Lectures—Wednesday and Friday at 11, first term; Tuesday at
10 and Wednesday at 11, second term.*

Laboratory—Friday, 1.30-3.30.

Professor Hawley.

MINERALOGY 13. ORE MINERALS AND MINERALOGRAPHY.

An advanced study of ore minerals and their genesis. Laboratory work will consist of a study of specimens from many deposits by means of the reflecting and petrographic microscopes. This class will alternate with Mineralogy 115. (Offered in session 1949-50.)

Prerequisite—Honour standing in Mineralogy 11.

Lectures and Laboratory four hours a week, to be arranged.

Professor Hawley.

MINERALOGY 14a. MINERALOGRAPHY.

Prerequisite—Honour standing in Mineralogy 11.

For students on Honours Geology Course only. An advanced course in the study of metallic minerals in polished sections. A practical and written examination will be given in this subject.

Text:

Microscopic Determination of the Ore Minerals, M. N. Short,
(U.S.G.S. Bull. 914, 1940).

Reading to be assigned.

*Laboratory—First term—Wednesday 10, and Thursday 1.30-3.30 or
3.30-5.30.*

Professor Hawley.

READING COURSES IN MINERALOGYS

R 1. World Distribution of Minerals and its Significance.

G. A. Roush, *Strategic Minerals* (McGraw-Hill, 1940). C. K. Leith, *World Minerals and World Politics* (McGraw-Hill, 1931).

*World Atlas of Commercial Geology, Part 7, Distribution of Mineral Production, U.S.G.S., 1921. *F. W. Clarke, *The Data of Geochemistry*, 5th Ed., U.S.G.S. Bulletin 770. *Mineral Economics*, Vol. III, Am. Institute of Mining Engineering Series

(McGraw-Hill, 1937) *Minerals in World Affairs*, T. S. Lovering (Prentice-Hall, 1943).

R 2. X-rays and Crystal Structure.

R. W. James, *X-ray Crystallography*, 1930 (Methuen and Co., London). **The Crystalline State*, W. H. and W. L. Bragg, Vol. I (Macmillan, 1934). *Atomic Structure of Minerals*, W. L. Bragg (Cornell Univ. Press, 1937). R. W. G. Wyckoff, *The Structure of Crystals*, 2nd Ed., 1931.

*Books to be purchased by students. Others may be secured from departmental library.

R 3. Metamorphism of Minerals.

C. K. Leith and W. J. Mead, *Metamorphic Geology* (New York, 1915). *Metamorphism*, A. Harker (Methuen & Co., 1932). F. W. Clarke, *The Data of Geochemistry*, 5th ed., U.S.G.S. Bulletin 770. Selected Papers in the Journal of Geology and Economic Geology.

Note: Field work or research on mineral deposits may be substituted for one of the above reading courses. A complete report of such work must be submitted to the department.

GRADUATE COURSES

Lecture courses: Mineralogy 115 and 116. By special arrangement certain courses in Geology may be substituted.

MINERALOGY 115. ADVANCED OPTICAL MINERALOGY.

Offered in alternate years with Mineralogy 116.

Offered in session 1949-50.

Text-book:

A. N. Winchell: *Elements of Optical Mineralogy*, Part II, (J. Wiley and Sons, 1933).

Lectures and Laboratory—Five hours, to be arranged.

Professor Hawley.

MINERALOGY 116.

Advanced study of ore minerals and mineralogicalogy.

Offered in session 1949-50.

Text-books:

Mineral Deposits, Lindgren (McGraw-Hill, 1933).

Determination of Opaque Minerals, C. M. Farnham, 1st ed. (McGraw-Hill, 1931).

Microscopic Determination of the Ore Minerals, M. N. Short, 1941, U.S.G.S.).

Lectures and Laboratory—Five hours a week, to be arranged.

Directed Special Studies, on either metallic or non-metallic minerals, with thesis. Professor Hawley.

MINERALOGY 117a. STRUCTURAL CRYSTALLOGRAPHY.

An introduction to our present knowledge of the structure of crystals, mainly by means of x-ray diffraction data, and the application of this knowledge to Mineralogy. Practical experience is gained by the use of modern x-ray diffraction apparatus.

Text-book:

C. W. Bunn, *Chemical Crystallography*. Oxford (Clarendon), 1946.

Reference books:

W. H. Bragg and W. L. Bragg, *The Crystalline State* (Macmillan Co., 1934).

R. C. Evans, *An Introduction to Crystal Chemistry* (University Press, 1939).

Miscellaneous assigned readings.

Lectures and Laboratory—Five hours per week, to be arranged.

Offered in session 1949-50.

Prerequisites: Mineralogy 1, and Mineralogy 10b, or the equivalent.

Graduate students in Physics or Chemistry will be admitted to this course.

Professor Berry.

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MUSIC

ASSOCIATE PROFESSOR—Graham George, Mus.D.

Music 1, 2 and 3 may be counted towards the degree of Pass B.A. either as a group or as individual free options; towards the degree of Honours B.A. as free options. Music 1 is normally prerequisite to Music 2 and Music 3, but students who have passed a recognized course outlining musical history may be admitted to Music 2 or 3.

On recommendation of the Departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine

Arts (Music, Drama, Art) to make up a group towards the degree of Pass B.A.

For information with regard to prizes, see page 91.

MUSIC 1. AN OUTLINE OF THE HISTORY OF MUSIC.

A study of some important phases in the development of musical forms and styles. Origins; sixteenth century polyphony and the music of the dance; monody and the developments of the seventeenth century; Bach and his contemporaries; the music of Haydn, Mozart and Beethoven; the Romantic period. This study is carried on aurally, and technical knowledge of music is not a prerequisite.

A three-hour listening period per week is provided to give students opportunity for analytical listening, Tuesdays, 2.30-5.30.

Text: *The Structure of Music*, R. O. Morris (Oxford).

Monday, Wednesday and Friday at 4.30.

MUSIC 2. THE VIENNESE PERIOD.

An aural study of the music of Haydn, Mozart and Beethoven, with special attention to the principles of key-structure which underlie their work.

A two-hour listening period per week is provided for analytical listening, time to be arranged.

Text: *Beethoven*, D. F. Tovey (Oxford).

Hours to be arranged.

MUSIC 3. THE ROMANTIC PERIOD.

An aural study of the music of the nineteenth century, showing the alteration of emphasis from structure to subjective expression, with Romantic literature as an important stimulating force.

A two-hour listening period per week is provided for analytical listening, time to be arranged.

Text: *Opera*, Edward J. Dent (Pelican).

Hours to be arranged.

PHILOSOPHY

THE JOHN AND ELLA G. CHARLTON PROFESSOR OF PHILOSOPHY—

A. R. C. Duncan, M.A. (From September, 1949).

ASSOCIATE PROFESSOR—H. Martyn Estall, M.A., Ph.D.

LECTURER—J. P. de C. Day, B.Phil.

1. Students choosing Philosophy as one of the main subjects on a Pass Course take Philosophy 1, Psychology 2 and Philosophy 3 or 10.
2. Philosophy 1 is prerequisite to all later courses in Philosophy.
3. For information in regard to Scholarships in Philosophy, see page 71.
4. The Honours Course in Philosophy.

Candidates planning to take the Honours Course in Philosophy are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), a language, a science (Biology is recommended), and a fifth subject which may be a second language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they may lack.

- (a) The Major.

For Honours in Philosophy a student takes: Philosophy 1, Psychology 2, Philosophy 10, 11, 18, Psychology 15, Philosophy 29, and two full courses from the following: 14a, 14b, 17, 31a, 31b, 33.

Three reading courses, R1, R2, R3.

- (b) The Minor.

Minors recommended for Philosophy are: History, Economics, English, Classics, Mathematics, Psychology, or others selected in consultation with the Department.

- (c) Compulsory general courses to complete the work for degree.
With History as Minor: English 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may take a free option as the second general course.
With Economics as Minor: English 2.

With English as Minor: a language, a science. If the candidate has Grade XIII standing in both a language and a science he may take free options as the two general courses.

With Latin as Minor: English 2, a science. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

With Mathematics as Minor: English 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may take a free option as the second general course.

5. A Minor in Philosophy is ordinarily Philosophy 1, Psychology 2, Philosophy 10, and two full courses chosen from Philosophy 11, 14a, 14b, 17, 18, 29, 31a, 31b, 33.

COURSES OF INSTRUCTION

PHILOSOPHY 1. INTRODUCTION TO PHILOSOPHY.

Introduction to critical thinking in logic and ethics.

Text-books:

Black, *Critical Thinking* (Prentice-Hall); Aristotle, (Modern Library, Ed. R. McKeon); Wheelwright, *Critical Introduction to Ethics* (Doubleday Doran).

*Sections A and B: Monday, Wednesday and Friday at 9;
Section C: Monday, Wednesday and Friday at 11; Section
D: Tuesday, Thursday and Saturday at 9.*

Professor Estall, Mr. Day.

PHILOSOPHY 3. INTRODUCTION TO POLITICAL PHILOSOPHY.

A critical account, in historical perspective, of the principal concepts and arguments in political philosophy.

Text-books:

Foster, *Masters of Political Thought*, Vol. I (Houghton Mifflin); Jones, *Masters of Political Thought*, Vol. II (Houghton Mifflin); Spahr, *Readings in Recent Political Philosophy*.

Tuesday, Thursday, and Saturday at 11.

Mr. Day.

PHILOSOPHY 10. HISTORY OF PHILOSOPHY.

A survey of major systems in ancient and modern philosophy: first term, from the pre-Socratics to Stoics and Epicureans; second term, from Bacon to Kant.

Text-books:

T. V. Smith, *Philosophers Speak for Themselves* (Chicago Univ. Press); Smith and Greene, *Descartes to Kant* (Chicago Univ. Press).

Monday, Wednesday and Friday at 10.

Professors Duncan and Estall.

PHILOSOPHY 11. RECENT EUROPEAN AND AMERICAN PHILOSOPHY.

A study of the main philosophical currents in the western world during the last hundred years. Among those whose writings will be

examined are: Hegel, Marx, Kierkegaard, J. S. Mill, Nietzsche, Bergson, James, Dewey, Whitehead, Russell.

Text-books to be announced.

(Not offered in 1949-50.)

Professor Estall.

PHILOSOPHY 14a. AESTHETICS.

Leading aesthetic theories of the last hundred years are studied in order to develop a constructive philosophy of art. The work of this course should help the student to form standards of appreciation and criticism of literature and the arts.

Text-book:

Rader, *A Modern Book of Aesthetics* (Holt).

(Not offered in 1949-50.)

PHILOSOPHY 14b. GENERAL THEORY OF VALUE.

A study of current theories of value,

Reading in:—Perry, *General Theory of Value*; G. E. Moore, *Principia Ethica*; Parker, *Human Values*; Dewey, *Theory of Valuation*.

(Not offered in 1949-50.)

PHILOSOPHY 17. PHILOSOPHY OF PLATO.

Reading the *Dialogues* and discussing the latest interpretations of their philosophy.

Text-book:

Plato, *Dialogues*, Tr. Jowett, Modern Library, 2 vols.

Hours to be arranged.

(Not offered in 1949-50.)

PHILOSOPHY 18. MORAL AND SOCIAL PHILOSOPHY.

The general approach will be as follows:

(a) Critical study of the historical development of moral and social theory;

(b) Examination of ethical issues in contemporary life.

Monday, Wednesday and Friday at 2.30.

Text to be announced.

Professor Duncan.

PHILOSOPHY 29. LOGIC AND SCIENTIFIC METHOD.

Text-book:

Cohen and Nagel, *Introduction to Logic and Scientific Method* (Harcourt Brace).

First Term:

Formal Logic—A study of the science of forms, extending from Aristotle to modern symbolic logic, and including an introduction to the philosophy of mathematics.

The following books are also recommended for study, but not prescribed for purchase:

H. Poincaré, *Science and Hypothesis*, *The Value of Science, Science and Method*; Quine, *Mathematical Logic*; B. Russell, *Introduction to Mathematical Philosophy*; J. W. Young, *Lectures on Fundamental Concepts of Algebra and Geometry*.

Second Term:

Scientific Method—A study of the methodology of the natural and social sciences, including an introduction to the principles of probability and statistics.

The following books are also recommended for study, but not for purchase:

N. Campbell, *What is Science?*; Carnap, *The Unity of Science*; Conant, *On Understanding Science*; R. von Mises, *Probability, Statistics and Truth*.

This seminar is intended for students of Philosophy, Mathematics and the natural and social sciences.

Hours to be arranged.

Mr. Day.

PHILOSOPHY 31a. METHODS AND IDEALS IN THE NATURAL SCIENCES.

- (a) An inquiry into the methodology of the natural sciences.
- (b) An examination of the theoretical basis of contemporary scientific ideals.

This is a seminar for students in philosophy or the natural sciences.

(Not offered in 1949-50.)

PHILOSOPHY 31b. METHODS AND IDEALS IN SOCIAL THOUGHT.

- (a) An inquiry into the methodology of the social sciences and the sociology of knowledge.

(b) An examination of the theoretical basis of contemporary social ideals.

This is a seminar for students in philosophy or the social sciences.

(Not offered in 1949-50.)

PHILOSOPHY 33. THEORY OF KNOWLEDGE.

An examination of the modern theories of knowledge, beginning with Kant, and including a study of recent philosophies of science.

Text-books:

Kant, *Critique of Pure Reason* (Norman Kemp Smith's translation); Cassirer, *Substance and Function*; C. I. Lewis, *Mind and the World Order*; Bradley, *Appearance and Reality*; B. Russell, *Human Knowledge*.

(Not offered in 1949-50.)

READING COURSES IN PHILOSOPHY.

R 1. Contemporary Philosophy.

Pepper, *World Hypotheses*; R. W. Church, *Bradley's Dialectic*; Whitehead, *Science and the Modern World*; H. Bergson, *The Two Sources of Morality and Religion*.

R 2. Hobbes, *Leviathan* (Parts I and II); Hume, *Enquiry Concerning the Principles of Morals*; Barker, *Social Contract* (Locke, Hume, Rousseau); Hegel, *Philosophy of Right*; J. S. Mill, *On Liberty*.

R 3. Thesis.

Topic to be selected in consultation with the department.

Note 1: Substitutions in Reading Courses 1 and 2 may be arranged for in consultation with the department to meet the special needs of individual students.

Note 2: Politics 32 (Modern Political Thought) may be substituted for R 2.

GRADUATE COURSES

PHILOSOPHY 110. RESEARCH COURSE IN GREEK PHILOSOPHY.

Hours to be arranged.

Professor Duncan.

PHILOSOPHY 111. RESEARCH COURSE IN CONTEMPORARY PHILOSOPHY.

Hours to be arranged.

Professor Estall.

DETAILS OF COURSES OF INSTRUCTION
PHYSICAL AND HEALTH EDUCATION

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PROFESSOR OF PHYSICAL AND HEALTH EDUCATION, AND DIRECTOR OF THE
SCHOOL OF PHYSICAL AND HEALTH EDUCATION—F. L. Bartlett, B.A.

MEDICAL OFFICER—P. M. Macdonnell, M.A., M.D., C.M.

ASSOCIATE PROFESSOR—J. F. Edwards, B.A.

ASSISTANT PROFESSOR—F. Tyndall, A.B.

ASSISTANT PROFESSOR—Marion Ross, B.A.

INSTRUCTOR—Diana Hawkins.

INSTRUCTOR—Kathleen King, B.Sc. (From September, 1949).

INSTRUCTOR IN SWIMMING—R. A. Gow.

Each first year student is given a careful examination by the Medical Officer at the beginning of his college course, the appointments being made on the day of registration. Corrective and remedial work is then given in the gymnasium when it is needed by the students.

With the exception of those excused by the Medical Officer because of ill-health, all first year students are required to take two hours of gymnasium work per week during the whole of the school year. The work varies throughout the year and as much time as possible is spent outdoors in the early Fall and Spring. This consists of touch football, cross-country running, track and field, and softball, while every student is given a swimming test and the non-swimmers are automatically placed in an instruction group.

Indoor work follows with cooler weather and consists of swimming, calisthenics, marching, setting-up exercises, and apparatus work on the parallel bars, the horse, the mats, and horizontal bar. The winter term brings basketball, indoor softball, group games, and indoor track and field. Each student is encouraged to learn something about all of these activities and a wide variance of exercise is achieved.

Equivalent credit is given for attendance at regular organized swimming and life-saving classes, and for playing on university teams in track, football, hockey, water polo, gymnastics, tennis, and boxing and wrestling. Such credit *terminates with the regular scheduled programme of activities of each respective club*, when students will rejoin the weekly gymnasium classes or engage in any other of the sports listed above.

At the time of registration each new civilian student must enroll in a class in physical education. For students in Arts these classes are held in the main gymnasium building as follows:

- Men (a) Monday and Wednesday 3.30—4.30 p.m.
 (b) Tuesday and Thursday 2.20—4.30 p.m.
 (c) Wednesday and Friday 2.30—3.30 p.m.
- Women (a) Monday and Wednesday 11.00—12.00 a.m.
 (b) Tuesday and Thursday 10.00—11.00 a.m.
 (c) Wednesday and Friday 2.30—3.30 p.m.

Freshmen in Arts whose academic time-table conflicts with the above hours will be placed in other classes on application to the Director of Physical Education.

PHYSICS

EMERITUS PROFESSOR—A. L. Clark, B.Sc., Ph.D., LL.D., F.R.S.C.

PROFESSOR—J. K. Robertson, M.A., F.R.S.C.

CHOWN SCIENCE RESEARCH PROFESSOR OF PHYSICS—J. A. Gray,
 O.B.E., D.Sc., F.R.S.C., F.R.S.

PROFESSORS—E. Flammer, B.Sc., Ph.D.

E. E. Watson, M.Sc., Ph.D.

H. M. Cave, M.A., Ph.D.

H. W. Harkness, B.Sc., B.A., M.Sc., Ph.D.

ASSOCIATE PROFESSOR—J. V. Hughes, A.R.C.S., B.Sc., D.I.C., Ph.D.

ASSISTANT PROFESSOR—D. T. Roberts, B.Sc., Ph.D.

INSTRUCTOR—W. J. Forsyth, B.Sc.

REGULATIONS AND ANNOUNCEMENTS

1. Students offering Physics as one of the chief subjects on a Pass Course take Physics 2, 11, 14a and 13b.

2. The Honours Course in Physics.

Candidates planning to take the Honours Course in Physics are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, a language, a fifth subject which should be Chemistry or Biology. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

The Major is made up as follows: Physics 2, 11, 12a, 14a, 10b, 13b, 16a, 21a, 17b, 20b, with two supporting courses. When the Minor is in Mathematics, the two supporting courses are chosen

from Physics or Mathematics or another science, the choice to be made after consultation with the Head of the Department of Physics. When the Minor is in Chemistry or Biology the two supporting courses are Mathematics 2 and 13.

Three reading courses: Physics R1, R2, R3.

(b) The Minor

The Minor is normally taken in Mathematics or Chemistry or Biology but a candidate who wishes to take some other subject as Minor may make application to the Head of the Department of Physics.

(c) Compulsory general courses to complete the work for degree: English 2, Philosophy 1, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in the Major subject.

3. *High School Teaching Certificate in Mathematics and Physics and in Science.*

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Mathematics and Physics at the Ontario College of Education take the Honours Course in Mathematics and Physics, or Physics and Mathematics.

Candidates for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education take the Honours Course in General Science for Teachers (see below) or the regular Honours Course in two of Biology, Chemistry, Physics with two courses from the third science offered in place of free options or in substitution for courses ordinarily prescribed. For example, with Chemistry as Major, Physics as Minor, Biology 1 is taken in place of a free option and Biology 10 or 15 is substituted for one of Chemistry 22, 24, 25.

With Physics as Major, Chemistry as Minor, Biology 1 is taken in place of a free option and Biology 10 or 15 is substituted for a reading course.

With Physics as Major, Biology as Minor, Chemistry 1 is taken in place of a free option and Chemistry 2 in place of a reading course.

4. *General Honours Course in Science for Teachers.*

The following courses are required:

(a) Biology 10, 16, 11, 19, Reading Course 1.

(b) Chemistry 2, 10, 12, 13, Reading Course 1.

- (c) Physics 2, 11, 14a, 13b, Reading Course 1, Mathematics 2.
- (d) Compulsory general courses to complete the work for degree: English 2, Philosophy 1, a language, a free option. If the candidate has Grade XIII standing in a language he may use the third general course as a free option.
- (e) One general examination in each special subject.

5. When Physics is the Minor associated with Mathematics as Major, the Minor consists of Physics 2, 11, 14a and 13b, 12a and 10b.

When Physics is the Minor associated with Chemistry as Major, the Minor consists of Physics 2, 11, 14a and 13b and Mathematics 13.

6. When Physics is one of the three special subjects on the General Honours Course the prescription of work is as follows: Physics 2, 11, 14a, 13b, Reading Course 1 and Mathematics 2. If possible students should select Mathematics 13 as a free option.

7. For information in regard to Scholarships in Physics, see page 74.

COURSES OF INSTRUCTION

PHYSICS 1. MECHANICS, PROPERTIES OF MATTER, HEAT, WAVE-MOTION, SOUND, LIGHT, ELECTRICITY, AND MAGNETISM.

Text-book:

Stewart, *Physics* (Ginn and Company).

Lectures—Tuesday, Thursday, and Saturday at 11.

Mr. Forsyth.

Laboratory—Tuesday 1.30-3.30, Wednesday 1.30-3.30.

PHYSICS 2. LIGHT AND ELECTRICITY AND MAGNETISM.

Prerequisite: Physics 1.

Although not prerequisite, Mathematics 2 will be found very useful in this course, even if taken concurrently.

Texts:

Robertson, *Introduction to Physical Optics* 3rd Edition (Van Nostrand); Starling, *Electricity and Magnetism for Intermediate Students and Higher School Certificate* (Longmans, Green & Co.).

Lectures—Tuesday, Thursday, and Saturday at 9.

Professors Robertson and Watson.

Laboratory—Thursday 2.00-4.00; Friday 1.30-3.30.

Professor Robertson.

PHYSICS 11. MECHANICS.

Prerequisites—Physics 1, Physics 2, and Mathematics 2. Students on an Honours Course with Grade A standing in Physics 1 and Grade B standing in Mathematics 2 may take Physics 2 and Physics 11 in the same year.

Lectures—Monday at 10 and Friday at 2.30.

Laboratory and Problem Period—

Wednesday 1.30-4.30 or 2.30-5.30.

Professor Cave.

PHYSICS 10b. DYNAMICS OF A PARTICLE.

Text-book:

Lamb, *Dynamics* (Cambridge University Press).

Prerequisites—Physics 2 (62%) and Physics 11 (55%).

Lectures—Tuesday, Thursday and Saturday at 10.

Professor Cave.

Laboratory—Tuesday, 3.30-5.30.

Professor Watson.

PHYSICS 12a. INTRODUCTION TO THE MATHEMATICAL THEORY OF ELECTRICITY AND MAGNETISM.

Prerequisites—Physics 2 (62%) and Physics 11 (55%).

Lectures—Tuesday, Thursday, and Saturday at 10.

Professor Watson.

Laboratory—Tuesday, 3.30-5.30.

Professor Watson.

PHYSICS 13b. ATOMIC PHYSICS.

Prerequisites—Physics 2 (62%) and Mathematics 2.

Text-book:

J. A. Crowther, *Ions, Electrons and Ionizing Radiations.*

(Arnold)

Lectures—Monday, Wednesday and Friday at 11.

Laboratory—Thursday, 1.30-3.30 or 3.30-5.30.

Professors Gray and Cave.

PHYSICS 14a. THERMODYNAMICS.

Prerequisites—Mathematics 2 and Physics 2 (62%).

Lectures—Monday, Wednesday and Friday at 11.

Laboratory—Thursday, 1.30-3.30 or 3.30-5.30.

Professor Harkness.

PHYSICS 16a. DYNAMICS OF RIGID BODIES.

Prerequisite—Physics 10b (55%).

Text-book:

Gans, *Vector Analysis* (Blackie).*Lectures—Monday, Wednesday and Friday at 11.*

Professor Flammer.

PHYSICS 17b. PHYSICAL OPTICS.

Prerequisites—55% on each of Physics 10b, 12a, and 13b.

*Lectures—Tuesday and Thursday at 11.**Laboratory—Tuesday, 2.30-4.30.*

Professor Robertson and Professor Harkness.

PHYSICS 20b. ELECTRICITY AND MAGNETISM.

Prerequisites—55% each on Physics 10b, 12a and 13b.

Text-book:

Abraham and Becker, *Classical Magnetism and Electricity* (Blackie).*Lectures—Monday, Wednesday, and Friday at 11.*

Professor Flammer.

PHYSICS 21a. KINETIC THEORY OF GASES.

Prerequisites—55% on each of Physics 10b, 12a, 13b, and 14a.

Text-book:

Bloch, *Kinetic Theory of Gases*.*Lectures—Tuesday and Friday at 10, Thursday at 11.***PHYSICS 22. ADVANCED LABORATORY COURSE.**

This is the equivalent of a whole lecture course and may be one of the two supporting courses, when Physics is chosen as a Major. (See 2(a), page 204.)

Professors Robertson, Gray and Hughes.

READING COURSES IN PHYSICS.

R 1. Mechanics, Selected parts of Vol. I, Grimsehl's *Text-book of Physics* (Blackie).

Selected parts of Electricity and Magnetism, being Vol. III of Grimsehl's *Text-book of Physics* (Blackie).

R 2. Properties of Matter, Selected parts of Vol. I, Grimsehl, Textbook of Physics (Blackie).

R 3. Planck, *Thermodynamics* (Macmillan).

The principle Physics Journals and books relating to the lectures and the laboratory work are kept in the Library of the Physics Department and in the University Library, where they may be freely consulted by the students. Certain of these may be borrowed for limited periods by making application to the librarian in charge.

GRADUATE COURSES

Lecture courses: A minimum of three lectures a week on selected topics.

PHYSICS 27. MECHANICS.

The development and application of such important principles as the Principle of Virtual Work, Principle of d'Alembert, Hamilton's Principle of the Least Action, Lagrange's Equations, and a brief treatment of Non-Newtonian Mechanics.

Three hours.

Professor Flammer.

PHYSICS 28. QUANTUM MECHANICS.

Professor Flammer.

PHYSICS 35. DIRECTED SPECIAL STUDIES.

POLITICAL AND ECONOMIC SCIENCE

THE SIR JOHN A. MACDONALD PROFESSOR OF POLITICAL AND ECONOMIC SCIENCE—W. A. Mackintosh, M.A., Ph.D., F.R.S.C.

PROFESSOR—R. G. H. Smalls, B.Sc.(Econ.), F.C.A.

PROFESSOR—C. A. Curtis, B.A., Ph.D., F.R.S.C.

PROFESSOR—F. A. Knox, B.A., F.R.S.C.

THE HARDY PROFESSOR OF POLITICAL SCIENCE—

J. A. Corry, LL.B., B.C.L., LL.M., F.R.S.C.

PROFESSOR AND HEAD OF THE DEPARTMENT OF INDUSTRIAL RELATIONS—

J. C. Cameron, M.Com.

PROFESSOR—W. H. Poole, M.A.

PROFESSOR—J. L. McDougall, M.A.

ASSOCIATE PROFESSOR—L. G. Macpherson, B.A., C.A.

ASSOCIATE PROFESSOR AND DIRECTOR OF THE INSTITUTE OF LOCAL GOVERNMENT—K. G. Crawford, M.A.

ASSOCIATE PROFESSOR OF INDUSTRIAL RELATIONS—C. H. Curtis, M.A.

ASSOCIATE PROFESSOR—M. C. Urquhart, B.A.

ASSISTANT PROFESSOR—J. E. Hodgetts, M. A., Ph.D. (on leave, 1949-50).

ASSISTANT PROFESSOR—J. E. Smyth, M.Com., C.A.

LECTURER—V. W. Malach, B.A., B.Com., Ph.D.

LECTURER IN POLITICAL SCIENCE—R. Y. Grey, B.A. (Session 1949-50).

INSTRUCTOR IN POLITICAL SCIENCE—Jan Meisel, M.A. (Session 1949-50).

REGULATIONS AND ANNOUNCEMENTS

1. Students taking only one course in this Department may choose Economics 4 or Politics 2.

2. The Department of Political and Economic Science may be regarded as a double department for purposes of the Pass Course and students may select either one or both of Economics and Politics as special subjects. Groups may be made up as follows:

- (i) Economics 4, 10, 12.
- (ii) Politics 2, 30, and 37 or 39.
- (iii) Economics 4, Politics 2, and one of Economics 10, 12, 13, Politics 30, 31, 36, 39.

For entrance to courses numbered 10 or higher, in either Economics or Politics, the student must qualify by obtaining Grade B in the prerequisite course.

3. Students applying for admission to the Honours Course must have at least Grade B standing in Economics 4 (for Economics) or Politics 2 (for Politics).

4. For information in regard to Scholarships in Political and Economic Science see page 71.

5. For purposes of the Honours Course, the Department of Political and Economic Science may be regarded as a double department; a student may take a Major in Economics and a Minor in Politics, or a Major in Politics and a Minor in Economics.

Candidates planning to take the Honours Course in Economics or Politics are advised to offer Grade XIII subjects as follows: English, History, Latin or Mathematics (3 papers), a science, a language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major

A Major in Economics (with History, Philosophy or Mathematics as Minor) is made up as follows: Economics 4, Politics 2, Economics 10, 11a, 12, 13, 15, 20, 21, 22, 25 and three readings courses, Economics R1, R2, R3.

A Major in Economics (with Politics as Minor) is made up as follows: Economics 4, 10, 11a, 12, 13, 15, 20, 21, 22, 25, three reading courses, Economics R1, R2, R3, and an additional course in History, Philosophy or Mathematics.

A Major in Politics (with History, Philosophy or Mathematics as Minor) is made up as follows: Politics 2, Economics 4, Economics 10, Politics 30, 31, 32, 36 and 37, three reading courses R1, R2, R3, and one of Politics 34 and 39.

A Major in Politics (with Economics as Minor) is made up as follows: Politics 2, 30, 31, 32, 34, 36, 37 and 39, three reading courses, R1, R2, R3, and an additional course in History or Philosophy.

(b) The Minor

The Minor is normally taken in Philosophy, History, Mathematics or Economics or Politics.

(c) Compulsory general courses to complete the work for degree.

With Economics or Politics as Major and Philosophy as Minor: English 2.

With Economics as Major and Politics as Minor or Politics as Major and Economics as Minor: English 2.

With Economics or Politics as Major and History or Mathematics as Minor: English 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may use the second and third general courses as free options.

(d) Two general examinations in the Major subject.

6. The Honours Course in Public Administration is made up as follows:

- (a) Politics 2, 30, 31, 37, 39, and three reading courses, Politics R1, R2, R3, Economics 4, 10, 12, and any two of Economics 13, 15, 11a and 27b; one further course in Politics or Economics numbered 10 or over; Philosophy 1, 2, History 3.

- (b) Compulsory general courses: English 2.

(c) Two general examinations in Politics.

7. Students taking Economics as one of the main subjects of the General Honours Course must take Economics 4, 10, 12, any two of Economics 13, 15, 11a and one other half-course, and Economics Reading Course 1.

Students taking Politics as one of the main subjects of the General Honours Course must take Politics 2, 30, 31, 32, one of Politics 36, 37 and 39, and Politics Reading Course 1.

8. A Minor in Economics normally consists of Economics 4, 10, 12, and any two of Economics 13, 15, 11a and another half-course; a Minor in Politics consists of Politics 2, 30, 31 and any two of Politics 32, 36, 37 and 39, but students preparing for admission to the Course of study leading to the Interim High School Assistant's Certificate, Type A, in History at the Ontario College of Education make up the Minor as follows: Economics 4, Politics 2, Economics 10, and two further courses in Economics or Politics.

INSTITUTE OF LOCAL GOVERNMENT

The Institute of Local Government is a branch of the Department of Political and Economic Science. Its purpose is to give sustained study and analysis to the problems of local government including the relations between the municipalities and the provincial and Dominion governments. The results of research undertaken by it are made available in bulletins as occasion warrants.

The Institute also publishes from time to time bulletins containing data of interest to municipal governments and generally acts as a clearing house for information about the financial and administrative practices of municipal governments. Instruction in local government is offered and students wishing to prepare themselves for posts with municipalities will find association with the Institute a useful preparation.

COURSES OF INSTRUCTION

Economics

ECONOMICS 4. INTRODUCTION TO ECONOMICS.

Economic geography; Economic history, especially of Europe; Regional studies.

Text-books:—

Jones and Darkenwald, *Economic Geography* (Macmillan, 1941); Heaton, *Economic History of Europe* (Harper, 1948).

Tuesday, Thursday, and Saturday at 9.

Professors Knox and Urquhart.

ECONOMICS 10. PRINCIPLES OF ECONOMICS.

A general course in economic analysis in which an attempt is made to develop a working knowledge of economic principles and their application. The course should ordinarily be taken at the same time as Economics 12.

Prerequisite, Grade B in Economics 4.

Text-books: To be assigned.

Monday, Wednesday, and Friday at 2.30.

Professors Curtis and Mackintosh.

ECONOMICS 11a. INTRODUCTION TO STATISTICS.

An introduction to the use of statistics in the fields of economics and commerce.

Text-book:

Croxton and Cowden, *Applied General Statistics* (Prentice-Hall, 1939).

Monday, Wednesday, and Friday at 10.

Professor McDougall.

ECONOMICS 12. MONEY, BANKING, AND INTERNATIONAL TRADE.

Prerequisite, Grade B in Economics 4.

Text-book:

Chandler, *The Economics of Money and Banking* (Harper and Bros., 1948).

Mimeograph readings.

Tuesday, Thursday, and Saturday at 11.

Professor Knox.

ECONOMICS 13. INTRODUCTION TO ACCOUNTING AND FINANCE.

An introductory study of accounting method with a related examination of some of the chief problems of corporation finance.

For Honours students whose major subject is Economics, it has a weight of two and one-half hours per week. At the beginning of the term it will meet at the same hour as Commerce 63.

Text-book:—

Smalls, *Accounting Principles and Practice* (Ryerson Press).

ECONOMICS 15. MODERN ECONOMIC THEORY.

A brief study of the development of modern schools of economic thought followed by discussion of the theory of equilibrium.

Prerequisite, Economics 10.

Text-books:—

Gray, *The Development of Economic Doctrine* (Longmans).

Cassel, *Theory of Social Economy* (Harcourt, Brace).

Marshall, *Principles of Economics* (Macmillan).

Joan Robinson, *Theory of Imperfect Competition* (Macmillan).

Chamberlin, *Theory of Monopolistic Competition* (Harvard University Press).

Monday, Wednesday, and Friday at 11.

Professor Urquhart.

ECONOMICS 20. MONETARY THEORY AND POLICY.

A seminar course dealing with monetary, business cycle and international trade theory and with policy problems.

Prerequisite, Economics 15.

References:

Haberler, *Prosperity and Depression* (League of Nations, 1941). Keynes, *General Theory of Employment, Interest, and Money* (Macmillan, 1936).

League of Nations: *Economic Stability in the Postwar World* (1945).

Tuesday and Thursday at 2.30.

Professors Knox and Urquhart.

ECONOMICS 21. APPLIED ECONOMICS.

A study of the application of economic theory to the problems of the distribution of national wealth and income as affected by monopoly, public finance, and other public policies.

Prerequisite, Economics 15.

Text-book:

Pigou, *Economics of Welfare* (Macmillan)

Monday, Wednesday, and Friday at 10, Commerce Building.

Professor C. A. Curtis.

ECONOMICS 22. SOCIALISM.

A study of the economic principles involved in the allocation of economic resources in socialist and other directed economies. A seminar course one hour per week open only to Honours students taking a major in Economics.

Prerequisite, Economics 15.

Assigned readings.

Hours to be arranged.

Professor C. A. Curtis.

ECONOMICS 23. INDUSTRIAL RELATIONS.

This course will deal with the main economic and social forces which affect employer-employee relationships.

Prerequisite, Economics 10.

Text:

Lloyd G. Reynolds, *Labor Economics and Labor Relations* (Prentice-Hall), and assigned readings.

Monday, Wednesday and Friday at 3.30.

Professor C. H. Curtis.

ECONOMICS 25. ECONOMIC HISTORY.

A study of recent economic history with especial reference to North America. A course one hour per week open only to Honours students taking a major in Economics.

Assigned Readings.

Thursday at 1.30.

Professor Mackintosh.

ECONOMICS 26a. INTERNATIONAL TRADE AND FOREIGN MARKETING.

A study of the principles of international trade, foreign trade practice, trade regulation and current problems of external trade.

Tuesday, Thursday and Saturday at 11.

Professor Poole.

ECONOMICS 27b. PUBLIC FINANCE.

The principles of government finance with special reference to Canadian problems.

Tuesday, Thursday and Saturday at 11.

Professor Poole.

ECONOMICS 28b. ECONOMICS OF TRANSPORTATION.

The chief interest in this course will be in the economics of railway transportation in Canada.

Text-books:

R. A. C. Henry *et al*, *Railway Freight Rates in Canada* (Ottawa, King's Printer, 1939). W. T. Jackman, *Economic Principles of Transportation* (Toronto, University of Toronto Press, 1935). D. P. Locklin, *Economics of Transportation* (Chicago, Business Publications Inc., 1935).

Assigned Readings.

Monday, Wednesday, and Friday at 9.

Professor McDougall.

READING COURSES IN ECONOMICS:

R 1. Economic History of Canada and the United States.

R 2. Contemporary Economic Interpretations.

R 3. Thesis.

Students registered in any of these reading courses should obtain the syllabus of readings and instructions from the Department. Thesis topics are to be selected in consultation with members of the Department.

GRADUATE COURSES

ECONOMICS 100. PROBLEMS AND POLICY IN THE CANADIAN ECONOMY.

A seminar course on the scope of economic policy and on the application of economic analysis to specific problems of the Canadian economy.

Hours to be arranged.

Professor Mackintosh.

ECONOMICS 101. PUBLIC FINANCE.

A study of the theoretical and administrative problems of public finance with emphasis on the division of the national income between "private" and "public" uses and the effects of these uses on the size of the national income.

Hours to be arranged.

Professor C. A. Curtis.

ECONOMICS 102. LABOUR PROBLEMS.

Advanced study of labour problems.

Hours to be arranged.

Professor J. C. Cameron.

DIRECTED SPECIAL STUDIES.

In Monopolies, Public Control of Business, Public Finance, Industrial Relations, Economic History, National Income, Business Cycles and International Trade and Finance.

Professors Cameron, Curtis, Knox, Mackintosh and Urquhart.

N.B. Graduate students may select also certain undergraduate courses.

POLITICS

POLITICS 2. INTRODUCTION TO GOVERNMENT AND POLITICS.

A comparative survey of the structure of present day democratic governments and the effect on them of the expansion of governmental functions in the twentieth century.

Text-book:

Corry, *Democratic Government and Politics* (University of Toronto Press).

Monday, Wednesday, and Friday at 10.

Professor Corry and Mr. Meisel.

POLITICS 30. ELEMENTS OF POLITICAL SCIENCE.

An analysis of the principal concepts of political science.

Prerequisite, Politics 2.

Text-book:

MacIver, *The Web of Government* (Macmillan).

Tuesday, Thursday, and Saturday at 10.

Mr. Grey.

POLITICS 31. CANADIAN GOVERNMENT AND CONSTITUTIONAL LAW.

A critical study of the governmental institutions of Canada and in particular of the British North America Act and the federal system.

Text-books:—

Dawson, *The Government of Canada* (University of Toronto Press). Selected Cases from Cameron, *The Canadian Constitu-*

tion and the Judicial Committee. Selected Readings from the Report of the Commission on Dominion-Provincial Relations and from Appendices thereto.

Prerequisite, Politics 30.

Tuesday, Thursday, and Saturday at 11.

Professor Corry.

POLITICS 32. MODERN POLITICAL THOUGHT.

A survey of political thought since Machiavelli.

Text-book:

Sabine, *A History of Political Theory* (Henry Holt & Co.).

Assigned Readings.

Prerequisite, Politics 30.

Tuesday, Thursday and Saturday at 9.

Professor Corry.

POLITICS 34. INTERNATIONAL POLITICS.

This course is identical with History 27. Students will take the lectures and examination in History 27.

POLITICS 36. POLITICS OF DEMOCRACY.

A survey of democratic processes with reference to the rôle of political parties and of group activity generally.

Text-book:—

Herring, *The Politics of Democracy* (Rinehart). Assigned readings.

Prerequisite, Politics 30.

Monday, Wednesday and Friday at 9.

Mr. Meisel.

POLITICS 37. PUBLIC ADMINISTRATION.

A comparative analysis of the structure, management and general control of the public services in Great Britain, United States and Canada.

Text-book:

F. M. Marx, *Elements of Public Administration* (Prentice-Hall).

Prerequisite, Politics 30.

Monday, Wednesday, and Friday at 11.

Mr. Grey.

POLITICS 39. MUNICIPAL GOVERNMENT.

A survey of functions and administration of municipal government and its place in the structure of Canadian government.

K. G. Crawford, *Local Government in Canada* (mimeographed).

Assigned Readings.

Prerequisite, Politics 30, except where special permission is secured from the instructor.

Tuesday, Thursday, and Saturday at 10.

Professor Crawford.

READING COURSES IN POLITICS:

R 1. The Government of Great Britain.

Bagehot, *The English Constitution* (Oxford). F. A. Ogg, *English Government and Politics* (Macmillan). H. J. Laski, *Parliamentary Government in England* (Allen). Jennings, *Cabinet Government* (Cambridge). Jennings, *Parliament* (Cambridge). K. B. Smellie, *One Hundred Years of British Government* (Duckworth). L. S. Amery, *Thoughts on the Constitution* (Oxford).

R 2. The British Commonwealth.

Dawson, *Development of Dominion Status* (Oxford). Wheare, *The Statute of Westminster and Dominion Status* (Oxford). Mansergh, *The Commonwealth and the Nations* (Oxford). Jennings, *The British Commonwealth of Nations* (Hutchinson). Hodson, *Twentieth Century Empire* (Faber).

R 3. Thesis.

Subject to be selected after consultation with members of the Department.

GRADUATE COURSE

POLITICS 110. PUBLIC ADMINISTRATION AND PUBLIC POLICY.

A study of the implementing of complex public policy through boards, commissions, public corporations, and other administrative agencies.

Professor Corry.

Commerce and Administration

(See also calendar of the School of Commerce and Administration).

COMMERCE 50a. INDUSTRIAL MANAGEMENT.

A study of the application of the principles of management in industry.

Text: Lansburgh and Spriegel, *Industrial Management* (Wiley).

Monday, Wednesday, and Friday at 2.30.

Professor Cameron.

COMMERCE 51b. PERSONNEL ADMINISTRATION.

A study of labour problems, policies and procedures from the standpoint of the individual business enterprise.

Text: Watkins and Dodd, *The Management of Labor Relations* (McGraw-Hill).

Monday, Wednesday, and Friday at 2.30.

Professor Cameron.

COMMERCE 52. PRINCIPLES OF MARKETING.

A study of marketing functions, organization and policies from the standpoint of the business man.

Text-book:

Phillips and Duncan, *Marketing: Principles and Methods* (Irwin). McNair, Learned & Teele, *Problems in Merchandise Distribution* (McGraw-Hill).

Monday, Wednesday and Friday at 9.

Professor Poole.

COMMERCE 54. BUSINESS FINANCE.

A study of the economic problems of the corporate enterprise, throughout its life cycle.

Prerequisites—Economics 12 and Commerce 63.

Text-book:

Financial Post, *Survey of Corporate Securities*.

General Reading:

Buchanan, N. S., *The Economics of Corporate Enterprise* (Holt). Dewing, *Financial Policy of Corporations* (Ronald Press). Lincoln, *Applied Business Finance*, (McGraw-Hill). Guthman, *Analysis of Financial Statements* (Prentice-Hall). Crumbaker, *Organizing and Financing a Modern Business*

(Wylie). Gerstenberg, *Financial Organization and Management* (Prentice-Hall).

Monday, Wednesday, and Friday at 11.

Professor McDougall.

COMMERCE 59. BUSINESS INVESTIGATION AND RESEARCH.

An introduction to research methods. The student is required to select a topic and, under direction, to investigate and report upon it.

Hours to be arranged.

Professor McDougall.

COMMERCE 60. COMMERCIAL LAW.

A study of the elements of commercial law, including the general principles of the law of contract and agency and the law relating to sale of goods, negotiable instruments, partnerships and companies.

General Reading:

Caporn, *Cases on Contract* (Stevens and Sons). Falconbridge and Smith, *Manual of Canadian Business Law* (Pitman).

Special topics:

Caporn, *Cases on Contract* (Stevens and Sons). Falconbridge, *Law of Negotiable Instruments in Canada* (Ryerson). Jenks, *Book of English Law* (John Murray). *The [Dominion] Companies Act, 1934*, and other statutes.

Monday, Wednesday, and Friday at 9.

Professor Smyth.

COMMERCE 63. ELEMENTS OF ACCOUNTING.

An introductory study of the principles and practice of accounting. This course is intended for students who are proceeding to the degree of Bachelor of Commerce. Arts candidates who are interested in accounting may register in Economics 13.

Text-book:

Smails, *Accounting Principles and Practice* (Ryerson).

Monday, Wednesday and Friday at 11.

Professor Smyth.

COMMERCE 64. INTERMEDIATE ACCOUNTING.

A course in which the studies of Commerce 63 are carried to a more advanced stage and some further problems are considered.

Reading:

Smails, *Accounting Principles and Practice* (Ryerson). Paton, *Advanced Accounting* (Macmillan). Finney, *Principles of Accounting*, Intermediate, 3rd ed. (Prentice-Hall). Hatfield, *Accounting* (Appleton).

Tuesday, Thursday, and Saturday at 10.

Professors Smails and Macpherson.

COMMERCE 66a. COST ACCOUNTING.

This course presents the principles and methods of cost accounting.

Tuesday, Thursday, and Saturday at 9.

Professor Smails.

COMMERCE 67b. AUDITING AND INTERNAL CHECK.

A study of systems of internal check, the functions of internal and external auditors, and audit procedure generally.

Text-book:

Smails, *Auditing* (Pitman); *Auditing Standards* (American Institute of Accountants).

Tuesday, Thursday, and Saturday at 9.

Professor Smails.

PSYCHOLOGY

PROFESSOR—J. M. Blackburn, B.Sc., Ph.D. (From September, 1949).

ASSISTANT PROFESSOR—E. I. Signori, M.A., Ph.D.

INSTRUCTOR—J. A. Easterbrook, B.A. (From September, 1949).

REGULATIONS AND ANNOUNCEMENTS

1. Students choosing Psychology as one of the main subjects on a Pass Course take Philosophy 1, Psychology 2, 4. By special permission, Psychology 15 or 22 may be taken instead of 4. Those who are planning to enter a profession requiring a knowledge of Psychology, such as social service or nursery school work, are advised to enquire whether they are eligible for Psychology 15 and 22.

2. Psychology 2 is prerequisite to all later courses in psychology.

3. For information in regard to Scholarships in Psychology, see page 76.

4. The Honours Course in Psychology.

Candidates planning to take the Honours Course in Psychology are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), a language, a science (Biology is recommended), and a fifth subject which may be a second language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they may lack.

(a) The Major.

For Honours in Psychology a student takes: Philosophy 1, Psychology 2, 12, 15, 22, 24 or 26, 30, 35, and one supporting course, ordinarily a course in Biology. Three reading courses, R1, R2, R3.

(b) The Minor.

Minors recommended for Psychology are: Biology or Mathematics. In special cases other Minors may be offered with the consent of the Department.

(c) Compulsory general courses to complete the work for degree. With Biology as Minor: English 2, a language. If the candidate has Grade XIII standing in a language he may take a free option as the second general course.

With Mathematics as Minor: English 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may take a free option as the second general course.

5. A Minor in Psychology is ordinarily Philosophy 1, Psychology 2, and three of Psychology 12, 15, 22, 24, 26.

6. Candidates planning to take Honours in Psychology are expected to include a course in statistics in their programme. They should consult with the Department concerning the manner in which this may be done. Those planning to specialize in Psychology on the laboratory side are required to include Physics 1 in their Course if they have not already taken its equivalent.

COURSES OF INSTRUCTION

PSYCHOLOGY 2. AN ELEMENTARY SURVEY OF MENTAL LIFE.

Text-books:

Munn, *Psychology* (Houghton Mifflin); Klineberg, *Social Psychology* (Holt).

Monday, Wednesday, and Friday at 11.

Professor Blackburn.

PSYCHOLOGY 4. APPLIED PSYCHOLOGY.

A survey of the applications of psychology with particular reference to business and industry, education, vocational guidance, law, mental health and problems of adjustment, etc.

Text-books:

Ghiselli and Brown, *Personnel and Industrial Psychology* (McGraw-Hill, 1948). Skinner, *Elementary Educational Psychology* (Prentice-Hall, 1945).

Readings from: Burr, *Applied Psychology* (Prentice-Hall, 1948), Gray, *Psychology in Human Affairs* (McGraw-Hill, 1946).

Monday, Wednesday, and Friday at 9.

Professor Signori.

PSYCHOLOGY 12. PSYCHOLOGY OF THE CHILD.

An introduction to the psychological problems of the development and education of the child and young person. The elementary theory and application of intelligence testing are discussed, and arrangements will be made for practical work in the testing of children.

Text-books:

Freeman, *Individual Differences* (Holt); Morgan, *Child Psychology* (Farrar and Rinehart); Thorpe, *Child Psychology and Development* (Ronald Press); Breckenridge and Vincent, *Child Development*.

Readings are also required in other texts.

Monday, Wednesday, and Friday, 1.00-2.00

Mr. Easterbrook.

PSYCHOLOGY 15. EXPERIMENTAL PSYCHOLOGY.

The student participates in experiments which show how the character motives, perceptions, emotions and thinking of human beings are investigated. Practical applications of the findings will be discussed.

Text-book:

Boring, Langfeld and Weld, *Foundations of Psychology* (Wiley).

Lectures—Monday and Friday at 11.

Laboratory—Wednesday, 2.00-5.00.

Professor Signori.

PSYCHOLOGY 22. THE PRINCIPLES OF PSYCHOLOGY.

A systematic presentation of present day psychological doctrine, which is discussed in the light of the experimental evidence. Some experimental work will be required, the hours of which will be arranged.

Text-book:

Andrews, *Methods in Psychology* (Wiley).

Tuesday, Thursday and Saturday at 11.

PSYCHOLOGY 23. SOCIAL PSYCHOLOGY.

This course is designed for third or fourth year students, and primarily for honours students in psychology. Other students may take the course only with the permission of the instructor.

- (a) Social aspects of general psychology: a discussion of recent experimental work to illustrate the effect of social factors on perceiving, remembering, thinking and motivation;
- (b) Some theories of social psychology: preliminary consideration of the theories of McDougall, Freud, Benedict and M. Mead, and more extended study of the current work of Kardiner and his associates and the application of Lewin's field theory to the problems of social psychology;
- (c) Some applications of social psychology: attitudes and their developments; theory and methods of measuring attitudes; public opinion and propaganda; morale and its measurement (with special reference to the industrial group); race prejudice, industrial conflict, international tensions.

Assigned readings.

Hours to be arranged.

Professor Blackburn.

PSYCHOLOGY 24. ABNORMAL PSYCHOLOGY.

A study of the more modern theories of abnormal mental function, with their relation to normal psychology and everyday mental hygiene.

Text-books:

Cameron, *Psychology of Behaviour Disorders* (Houghton Mifflin); Landis and Bolles, *Abnormal Psychology* (Macmillan).

PSYCHOLOGY 26. TESTING THEORY AND PRACTICE.

An introduction to the theory and practice of child and adult intelligence testing; discussion and practical work on other types of tests, viz., temperament, interest and special abilities tests; a consideration of the more important aspects of test theory and test construction.

Text-books:

Terman and Merrill, *Measuring Intelligence* (Houghton Mifflin, 1937); D. Wechsler, *The Measurement of Adult Intelligence* (Williams and Wilkins, 1944); Richards, *Modern Clinical Psychology* (McGraw-Hill).

Tuesday, Thursday and Saturday at 10.

Professor Signori.

PSYCHOLOGY 30. PROBLEMS IN PSYCHOLOGY.

A specific problem of a minor character is taken up. A comprehensive report will be required, which will exhibit the results of the investigation and give an account of the previous literature. The work may be done in the laboratory; or, if a testing programme is involved, special arrangements may be made. This course is open for advanced students only, and by permission of the instructor concerned.

Hours by arrangement.

Professor Blackburn.

PSYCHOLOGY 35. CLINICAL PSYCHOLOGY.

Lectures and demonstrations, in psychology and abnormal psychology, having an especial bearing on the psychoses and psychoneuroses. The purpose is to give a first hand acquaintance with the clinical material and problems.

The student will prepare a comprehensive thesis.

The course is given to specially qualified students and by arrangement with the instructor and the department. Second class standing in Psychology 24 is prerequisite.

Texts and hours by arrangement.

Dr. C. H. McCuaig.

READING COURSES IN PSYCHOLOGY.

R 1. Systematic Psychology.

Heidbreder, *Seven Psychologies* (Appleton-Century); Sherif and Cantril, *Psychology of Ego-Involvement* (Wiley); Boring, *A History of Experimental Psychology* (Appleton-Century).

R 2. Dynamic Psychology.

McVeigh Hunt, *Personality and Behaviour Disorders* (Ronald), Vols. I and II, Chapters 1, 4, 5, 6, 9, 10, 14, 15, 16, 17; Allport, *Personality* (McGraw Hill); Healy, Bronner and Bowers, *Meaning and Structure of Psychoanalysis* (Knopf).

R 3. Applied Psychology.

Ghiselli and Brown, *Personnel and Industrial Psychology* (McGraw-Hill); Barker, Kounin and Wright, *Child Behaviour and Development* (McGraw-Hill); Murphy and Newcomb, *Experimental Social Psychology* (Harper).

In consultation with the department, qualified students may substitute Mathematics 20 for one of R 1, R 2, and R 3.

GRADUATE COURSES

PSYCHOLOGY 120. THE PSYCHOLOGY OF JUDGMENT AND DISCRIMINATION.

Hours to be arranged.

PSYCHOLOGY 125b. SENSATION AND PERCEPTION.

Hours to be arranged.

On consultation with the Department other graduate courses may be arranged.

RELIGIOUS KNOWLEDGE

PROFESSOR—Rev. H. A. Kent, E.D., M.A., D.D., LL.D., F.R.S.A., F.A.G.S.

ASSISTANT PROFESSOR—Rev. S. MacLean Gilmour, B.A., B.D., Ph.D., D.D.

COURSES OF INSTRUCTION

RELIGIOUS KNOWLEDGE 1. OLD TESTAMENT LITERATURE AND HISTORY.

The beginnings of Hebrew literature; ballads; war-songs; folklore and Saga; historical prose; the literary sources of the Hexateuch and historical books; the origin and development of prophecy; Hebrew poetry and wisdom literature; the Apocryphal and Apocalyptic writings. Hebrew political history down to the Maccabean period, and the relation of the Hebrew people to the surrounding nations of antiquity.

(Offered in 1950-51, but not in 1949-50.)

Tuesday, Thursday, and Friday at 1.30 p.m.

RELIGIOUS KNOWLEDGE 2. NEW TESTAMENT LITERATURE AND HISTORY.

Origin of New Testament writings: Codices and Manuscripts; the Latin Bible; the English Versions; the Gospels studied as the literary sources of the teaching of Jesus; the Synoptic and Johannine Problems; the life and letters of St. Paul; the Christian Apocalypses; the social and religious conditions in the Roman Empire and the spread of Christianity up to the end of the first century.

(Offered in 1949-50, but not in 1950-51.)

Text-books:

Moffatt, *New Translation of the New Testament*. Nock, *St. Paul* (Home University Library). Scott, *The Literature of the New Testament* (Columbia University Press). Other reading to be assigned.

Tuesday, Thursday and Friday at 1.30 p.m.

Principal Kent.

RELIGIOUS KNOWLEDGE 3. THE CHIEF LIVING RELIGIONS OF THE WORLD.

The history, principles, practices, and sacred literature of Hinduism, Buddhism, Confucianism, Shinto, Judaism, Zoroastrianism. Islam and Christianity; the strength and weakness of the various faiths; their present vitality; areas of possible or actual conflict and coöperation.

Text-books:

For class use: Hume, *The World's Living Religions*.

For reference: Archer, *Faiths Men Live By*; Jwiji, *The Great Religions of the Modern World*.

(Offered in 1949-50, but not in 1950-51.)

Tuesday, Thursday, and Saturday at 10.

RELIGIOUS KNOWLEDGE 4. CHRISTIANITY WITHIN WESTERN CIVILIZATION.

The impact of Christianity on the political, economic, social, intellectual and religious life of the Graeco-Roman world; the effect of Christianity on social relations, political theory, education, scholarship and literature during the mediaeval period; the social effects of the Protestant and Catholic Reformations; Christianity and the expansion of European peoples after the

discovery of the New World; Christianity and its environment in modern times; the strength and weakness of present-day Christianity; the challenge to Christianity of new paganisms.

Prerequisite: Religious Knowledge 2 or 3.

(Offered in 1950-51, but not in 1949-50).

ROMAN HISTORY, GREEK AND, SEE CLASSICS

RUSSIAN LANGUAGE AND LITERATURE

INSTRUCTOR—Valentina N. Krotkov, M.A.

Course of Instruction.

RUSSIAN A. Elementary Russian.

The object of this course is to give students the common vocabulary, the fundamental grammatical structure of the Russian language and a brief introduction to Russian literature. As this is an introductory course, no previous knowledge of the language is required.

Text-book:

A. Semenoff, *A New Russian Grammar*.

Hours to be arranged.

V. Krotkov

SPANISH LANGUAGE AND LITERATURE

EMERITUS PROFESSOR—J. H. Brovedani, D-ès-L.

ASSISTANT PROFESSOR—A. M. Fox, M.A. (From September, 1949).

LECTURER—Margaret E. Garnham, M.A.

INSTRUCTOR—Mrs. Catherine Schaffter, B.A. (From September, 1949).

REGULATIONS AND ANNOUNCEMENTS

1. Spanish A may be counted towards a Pass degree, or as an optional course on Honours Courses in subjects other than Spanish. It may not be counted towards a Major or Minor in Spanish. Students who enter the University without Matriculation in Spanish and who wish to

specialize in this subject may complete their programme of work in the usual time by taking Spanish A during their first winter session and Spanish 1 in the following summer.

2. Spanish A is a prerequisite to Spanish 1, and Spanish 1 is prerequisite to all other courses.

3. Students making Spanish one of the three main subjects on the Pass Course take Spanish A, 1, 2 or 6; or if they have entered with Grade XII Spanish 1, 2, 6 or 10; or if they have Grade XIII Spanish, 2, 6, and 10.

4. The Honours Course in Spanish.

Candidates planning to take the Honours Course in Spanish are advised to offer Grade XIII subjects as follows: English, Latin, French, Spanish, a science. Candidates who are not able to take the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

(a) The Major.

The Major is made up as follows: Spanish 2, 10, 22, 24, 29 and 30, with two supporting courses to be selected from the following four: Latin 2, French 2, an Honours course in English, and History 24 or History 12.

Three reading courses in Spanish, R1, R2, R3.

(b) The Minor.

The Minor is normally taken in French, German, English or Latin. The prescribed courses may be found under the Departmental prescriptions of the subject selected as the Minor.

(c) Compulsory general courses to complete the work for degree. With French or German or Latin as Minor: English 2, Philosophy 1, a science. If the candidate has Grade XIII standing in a science, he may take a free option as the third general course.

With English as Minor: Philosophy 1, a science, a free option. If the candidate has Grade XIII standing in a science, he may take a free option as the second general course.

(d) Two general examinations in the Major subject.

5. *High School Specialist Certificate in French and Spanish.*

Candidates for admission to the Course of Study leading to the Interim High School Assistant's Certificate, Type A, in French and Spanish at the Ontario College of Education take for degree:

Six lecture courses in Spanish: 2, 10, 22, 24, 29, 30.

Six lecture courses in French (see page 156).

Spanish Reading Courses 1 and 2 and a reading course in French; or Spanish Reading Course 1 and two reading courses in French.

Compulsory general courses to complete the work for degree: English 2, Latin 2, Philosophy 1. If the candidate did not offer a Grade XIII science on admission he must take a course in science in place of one of the reading courses in the special subjects in which two reading courses are normally required.

One general examination in each of French and Spanish.

6. For information in regard to Scholarships in Spanish see page 70.

COURSES OF INSTRUCTION

SPANISH A. ELEMENTARY SPANISH.

Prescribed texts:

Babcock and Treviño, *Introduction to Spanish* (Houghton Mifflin); Castillo and Sparkman, *Graded Spanish Readers* (Heath); Barlow and Steel, *Noche Oscura en Lima* (Croft); Martínez Sierra, *Rosina es Frágil* (Heath).

Monday, Wednesday and Friday at 9.

Monday, Wednesday and Friday at 10.

Tuesday, Thursday and Saturday at 9.

Monday, Wednesday and Friday at 1.30.

Mr. Fox and Mrs. Schaffter.

SPANISH 1. INTERMEDIATE SPANISH.

Prerequisite—Spanish Matriculation, or Spanish A.

Prescribed texts:

Cano, *La Vida de un Picaro* (Macmillan); Cano and Sáenz, *Easy Spanish Plays* (Heath); Martínez Sierra, *Sueño de una Noche de Agosto* (Holt); Barton and Cúneo, *Spanish Review* (Crofts); Ford and Cano, *A New Spanish Reader* (Holt); García Prada and Wilson, *Entendámonos* (Houghton Mifflin).

Monday, Wednesday, and Friday at 9.

Monday, Wednesday, and Friday at 1.30.

Mr. Fox and Miss Garnham.

SPANISH 2. ADVANCED SPANISH.

Prescribed texts:

Ramsey, *Spanish Grammar* (Holt); Bodsworth and James, *Cuentos Modernos* (Black); Blest Gana, *Martín Rivas* (Heath); Martínez Sierra, *Canción de Cuna* (Heath); Valdés, *José* (Heath); Quinteros, *Doña Clarines y Mañana de Sol* (Heath).

*Tuesday, Thursday, and Saturday at 10,
and two practice hours.*

Miss Garnham.

SPANISH 6. COMMERCIAL SPANISH... READING OF SPANISH PROSE.

Prerequisite, Spanish 1.

Prescribed texts:

Whittem and Andrade, *Spanish Commercial Correspondence* (Heath); Gallegos, *Doña Barbara* (Crofts); Pío Baroja, *Paradox Rey* (Espasa-Calpe); Cervantes (Cano), *Don Quijote* (Macmillan); Camba, *La Rana Viajera* (Heath).

Tuesday, Thursday, and Saturday at 10.

Mr. Fox.

SPANISH 10. MODERN AUTHORS.

Prescribed texts:

Alarcón, *El Sombrero de Tres Picos* (Holt); Quinteros, *Comedia y Drama* (Macmillan); Blasco Ibáñez, *La Barraca* (Holt); Valdés, *La Hermana San Sulpicio* (Espasa); Zorrilla, *Don Juan Tenorio* (Appleton).

Tuesday, Thursday, and Saturday at 9.

Miss Garnham.

SPANISH 22. DRAMA OF THE GOLDEN AGE. ADVANCED COMPOSITION.

Lope, Tirso, Alarcón, Calderón.

Text-book:

Cuatro Comedias (Norton).

Offered in 1949-50.

Monday, Wednesday, and Friday at 10.

Reserved for Honours students.

SPANISH 24. CERVANTES Y LA NOVELA DE COSTUMBRES.

Not offered in 1949-50.

Reserved for Honours students.

Monday, Wednesday, and Friday at 10.

SPANISH 29. LA NOVELA REALISTA Y EL TEATRO MODERNO.

Offered in 1949-50.

Reserved for Honours students.

Brett, *Nineteenth Century Spanish Plays* (Appleton).

Valera, *Pepita Jiménez* (Heath).

Galdós, *Doña Perfecta* (Heath).

SPANISH 30. RENAISSANCE AND THE ROMANTIC PERIOD. THE PICAR-
ESQUE NOVEL.

Reserved for Honours students.

R 1. Autores Modernos.

R 2. Autores Clásicos.

R 3. Literatura Hispano-americana.

GRADUATE COURSES

Lecture Courses and Directed Special Studies will be offered as needed.

GRADUATE COURSES

DEGREE OF MASTER OF ARTS

1. In the requirements for the degree of Master of Arts the emphasis is placed upon the candidate's grasp of the prescribed subjects and upon his ability to work with some independence, particularly in the field represented by his Directed Special Studies and the content of his Thesis. A reading knowledge of French and German is a decided advantage.

2. The degree of Master of Arts is awarded in recognition of the satisfactory completion of a Course of intensive study under the direction of one Department of the Faculty of Arts.

This work includes the following:

I. Directed Special Studies (with reports, essays, and conferences, as required by the Department concerned), together with a Thesis embodying the results of research or investigation.

II. Advanced courses, normally two in number. Graduate students taking courses open also to undergraduates will be required to do additional work in such courses.

The weight of work required is that of a full academic year, of which ordinarily half is represented by the Directed Special Studies and Thesis.

The Department may require the candidate to attend certain lectures cognate to the Course of study.

3. A candidate for the degree of Master of Arts must have taken the degree of Bachelor of Arts with first or second class honours. The Department concerned may, however, recommend that any application be not accepted.

4. Application for permission to become a candidate for the degree of Master of Arts must be made to the Registrar at least two weeks before the opening of the session. Applicants who are not graduates of Queen's University must send official certificates giving full details of their previous academic training, including courses taken and grades received, together with a marked Calendar showing the content of the courses. All applicants must specify the field in which they desire to carry on their studies.

5. The Committee on Graduate Studies will deal with the applications of candidates and the prescriptions of work officially proposed for each.

6. All candidates must take the following final examinations:

I. Written examinations:

- (a) on all courses prescribed,
- (b) on the Directed Special Studies.

The minimum standing required in each of these examinations is that of second class honours.

II. An oral examination on the subject of the candidate's research. The examination is conducted by a board of examiners appointed by the committee on Graduate Studies. This board includes—

- (a) At least two members of the department concerned.
- (b) At least two other members of the teaching staff of the University not members of the department concerned, to be selected by the department concerned.

The Chairman of the Graduate committee acts as the Chairman of the examining board or appoints some member of the University teaching staff, not a member of the department concerned, to do so.

Each candidate for the Master's degree must submit three typed copies of his thesis to the Registrar, not less than three weeks before the date of the convocation at which he plans to obtain the degree. The thesis must be read and approved by members of the examining board before the candidate is admitted to the oral examination. Two copies of the thesis become the property of the university, one of them is deposited in the University library, the other is placed in the care of the department concerned.

7. The fees charged are as follows: Sessional fee, \$110.00; Student Interest fees, \$30.50; Library fee, \$10. Students working in Science departments will pay, in addition, a Laboratory fee of \$6.00 (\$12.00 in the case of Chemistry). (See page 63.)

8. Except by special permission of the Committee on Graduate Studies, candidates are required to do all the work for the Master's degree in residence.

9. A candidate in full-time employment in the University or elsewhere is not normally accepted as a candidate for the M.A. degree.

GRADUATE RECORD EXAMINATIONS

"Queen's University welcomes the submission of Graduate Record Examination scores by any student applying for a scholarship and for admission to graduate work. This examination requires no special preparation. It is intended as an additional measure of the candidate's general preparation. For information regarding the examination, application should be made to the *Graduate Record Examination, Box 592, Princeton, New Jersey*. The fee for the examination is \$10.00."

THE DEGREE OF DOCTOR OF PHILOSOPHY

The University accepts candidates for the degree of Ph.D. only when it is satisfied that the Departments concerned are in a position to give the Course adequate attention and that the candidate is qualified to undertake the work.

A statement of the regulations governing the Course will be sent on application.

DEGREES AWARDED MAY, 1948, AND OCTOBER, 1948

HONORARY DEGREES

Degree of LL.D.

Henry Graham Bertram
 Leonard Walter Brockington
 Randolphe William Diamond
 Gershom William Mason
 Alexander Crawford Monteith
 Walter Wallace McLaren
 Archibald MacLeish
 Anna Eleanor Roosevelt (awarded in January,
 1948)
 Sir William Fletcher Shaw
 Harry Stevenson Southam

Degree of D.D.

George Alexander Edmison
 Albert Percy Menzies

DEGREES BY EXAMINATION

Degree of B.D.

J. C. Kellogg, B.A. Port Hope, Ontario
 H. J. W. McAvoys, B.A. Cut Knife, Saskatchewan

Degree of M.A.

R. W. Butcher, B.A. Paris, Ontario
 D. J. Daly, B.A., B.Com. Ottawa, Ontario
 T. G. Donnelly, B.A. Simcoe, Ontario
 *E. S. Gale, B.A. Toronto, Ontario
 E. R. Immel, B.A. Clifford, Ontario
 J. L. McNeil, B.A. Fenelon Falls, Ontario
 *D. L. McQueen, B.Com. Winnipeg, Manitoba
 W. H. Parsons, B.A. London, Ontario
 I. Joan Porteous, B.A. Kitchener, Ontario
 A. M. Ross, B.A. Embro, Ontario
 C. N. Rowse, B.A. Winnipeg, Manitoba
 R. W. Sharpe, B.Sc. Madison, Wisconsin
 L. B. Sherwin, B.A., B.Com. Oshawa, Ontario
 A. A. Smith, B.A. Kingston, Ontario
 *F. D. Smith, B.A. Toronto, Ontario
 *D. B. Sumner, B.A. Virden, Manitoba
 *R. W. Thompson, B.A. Kingston, Ontario
 P. M. Towe, B.A. London, Ontario
 B. F. Trotter, B.A. Kingston, Ontario

* Indicates graduates of October, 1948.

Degree of B.A. (Honours)

Barker, J. R. (General Honours Course, English, History, Politics, 2nd class Honours)	Kingston, Ontario
Beachey, R. W. (History, 2nd class Honours)	Wyoming, Ontario
Bell, N. A. (Economics, 1st class Honours)	Beynon, Alberta
*Binks, K. C. (History, 2nd class Honours)	Ottawa, Ontario
Bolker, H. I. (Biochemistry, 2nd class Honours)	Montreal, Quebec
Bouey, G. K. (Economics, 1st class Honours)	Trossachs, Saskatchewan
Bowman, R. I. (Biology, 1st class Honours)	Kitchener, Ontario
*Boyd, D. H. J. (Chemistry, 2nd class Honours)	Kingston, Ontario
Bradley, F. W. (History, 2nd class Honours)	Woodstock, Ontario
Brownell, H. H. (Chemistry, 1st class Honours)	Ottawa, Ontario
Brydges, E. C. (English, 2nd class Honours)	Ottawa, Ontario
Burgess, W. C. (History, 2nd class Honours)	Ottawa, Ontario
Caldwell, A. E. (English, 2nd class Honours)	Little Current, Ontario
Clarke, E. E. (Mathematics, 1st class Honours)	Kingston, Ontario
Clarke, M. E. C. (History, 3rd class Honours)	Ottawa, Ontario
Collins, D. J. (Politics, 2nd class Honours)	Palmerston, Ontario
Courtney, W. C. B. (Physics, 1st class Honours)	Windsor, Ontario
Craig, Frances M. (Specialist Course, French and Spanish, 2nd class Honours)	Cornwall, Ontario
Creighton, S. M. (Chemistry, 1st class Honours)	Brantford, Ontario
Damsteeg, I. C. (Mathematics, 1st class Honours)	Windham Centre, Ontario
Davidson, M. Eleanor (Biology, 1st class Honours)	Niagara Falls, Ontario
Davis, R. K. (History, 2nd class Honours)	Pembroke, Ontario
Delahay, E. C. (General Honours Course, English, Economics, Politics, 2nd class Honours)	Ottawa, Ontario
Densmore, A. A. (Physics, 2nd class Honours)	Red Deer, Alberta
Dunford, R. E. (History, 2nd class Honours)	Lakefield, Ontario
Dunn, D. W. (Physics, 1st class Honours)	Kingston, Ontario
Eadie, J. A. (History, 2nd class Honours)	Brockville, Ontario
East, D. W. (Biology, 1st class Honours)	Bloomfield, Ontario
Foden, S. R. (History, 2nd class Honours)	Toronto, Ontario
Franklin, W. J. (General Honours Course, Economics, Politics, Philosophy, 2nd class Honours)	Ottawa, Ontario
Gale, L. A. (Mathematics, 2nd class Honours)	Ottawa, Ontario
Gill, J. C. (Geology, 2nd class Honours)	Winnipeg, Manitoba
Goodspeed, D. J. (English, 1st class Honours)	Kingston, Ontario
Hawley, Nancy M. (Biology, 1st class Honours)	Kingston, Ontario
Heap, D. J. M. (General Honours Course, English, Greek, History, 1st class Honours)	Winnipeg, Manitoba
*Heimpel, A. M. (Biology, 1st class Honours)	Macdonald College, Quebec
Hennessy, P. H. (History, 2nd class Honours)	Campbellford, Ontario
Hill, J. E. (English, 2nd class Honours)	Peterborough, Ontario

Hutton, J. W. (Mathematics, 1st class Honours)	Ottawa, Ontario
Kenney, M. S. (Specialist Course, French and German, 2nd class Honours)	Ottawa, Ontario
Kincaid, D. W. (Specialist Course, Latin and French, 2nd class Honours)	Streetsville, Ontario
Lambert, A. F. (Mathematics, 2nd class Honours)	Sault Ste. Marie, Ontario
Layng, T. E. (History, 2nd class Honours)	Kingston, Ontario
LeWarne, A. Elizabeth (English, 2nd class Honours)	Mount Forest, Ontario
Malloch, A. E. (English, 2nd class Honours)	White Plains, New York
Martin, J. C. (Biology, 2nd class Honours)	Smiths Falls, Ontario
*Maxwell, D. S. (Philosophy, 1st class Honours)	Ottawa, Ontario
*Mendel, G. A. (History, 2nd class Honours)	Toronto, Ontario
Messel, Harry (Mathematics, 1st class Honours)	Rivers, Manitoba
Milks, J. E. (Chemistry, 2nd class Honours)	Ottawa, Ontario
Moncrief, Ethel M. (Politics, 2nd class Honours)	Port Hope, Ontario
Morgan, J. T. (Politics, 2nd class Honours)	Toronto, Ontario
McElroy, G. W. E. (French, 1st class Honours)	Dunham, Quebec
McLaren, K. G. (Mathematics, 2nd class Honours)	Perth, Ontario
McLaughlin, J. P. (History, 2nd class Honours)	Toronto, Ontario
McLellan, C. D. (Mathematics, 2nd class Honours)	Napanee, Ontario
*Nelles, M. K. (Politics, 2nd class Honours)	Ottawa, Ontario
Nelson, Violet M. (History, 2nd class Honours)	Ottawa, Ontario
Nixon, W. C. (Physics, 1st class Honours)	Toronto, Ontario
Paroian, Nancy (Mathematics, 1st class Honours)	Windsor, Ontario
Pattison, J. D. (Economics, 1st class Honours)	Toronto, Ontario
Peacock, Fletcher (Economics, 1st class Honours)	Fredericton, New Brunswick
Putman, Mary E. (English, 2nd class Honours)	Kingston, Ontario
Ramsay, J. M. (Biology, 1st class Honours)	Barrie, Ontario
Schlichter, D. E. (Mathematics, 2nd class Honours)	Kingston, Ontario
Scott, Jean G. (Biology, 2nd class Honours)	Ottawa, Ontario
Southey, J. B. S. (Economics, 1st class Honours)	Bowmanville, Ontario
Spence, Olive M. (History, 2nd class Honours)	Gananoque, Ontario
Stewart, Ethel G. (History, 2nd class Honours)	Virden, Manitoba
Tanner, H. C. (Biology, 1st class Honours)	Montreal, Quebec
Thomson, W. K. (Biology, 1st class Honours)	Goderich, Ontario
Tougas, R. R. (Psychology, 1st class Honours)	Kingston, Ontario

Tracy, G. L. (Specialist Course, French and German, 2nd class Honours)	Kingston, Ontario
Tsuyuki, Hiroshi (Biochemistry, 2nd class Honours)	Lillooet, British Columbia
*Twamley, B. E. (Biology, 2nd class Honours)	Listowel, Ontario
Vannest, Margaret E. (English, 2nd class Honours)	Napanee, Ontario
Vittorio, P. V. (Biology, 1st class Honours)	Cornwall, Ontario
Wand, Bernard (Philosophy, 1st class Honours)	Montreal, Quebec
Wilcox, J. M. (English, 2nd class Honours)	Norwich, Ontario
Willoughby, D. S. (Biology, 2nd class Honours)	Kingston, Ontario
*Wilson, L. A. (History, 2nd class Honours)	Ottawa, Ontario
*Young, J. H. (Politics, 1st class Honours)	Victoria, British Columbia

Degree of B.A. (Pass)

Agla, Gladys E.	Harrow, Ontario
Anderson, Olive M.	Calgary, Alberta
Arbique, G. H.	Ottawa, Ontario
*Atkinson, A. P.	Simcoe, Ontario
Badanai, H. L. G.	Fort William, Ontario
Baker, Virginia I.	Smiths Falls, Ontario
Barrie, R. O.	Peterborough, Ontario
Beckel, C. G.	Elgin, Ontario
Bedal, C. L.	Brighton, Ontario
Bell, Jean C.	Cherry Valley, Ontario
Bell, Winifred A.	St. Thomas, Ontario
Bermingham, Barbara J.	Ancaster, Ontario
Berry, E. Christine	Ottawa, Ontario
Better, Ned	Outremont, Quebec
Blair, R. E.	Quebec City, Quebec
Blake, M. Josephine	Jordan Station, Ontario
Blyth, Helen M.	Guelph, Ontario
Boehmer, Marjorie E.	Kitchener, Ontario
*Booth, G. W.	Mount Julian, Ontario
*Brannen, E. N.	Clark's Harbour, Nova Scotia
Bronskill, Joan F.	Braeside, Ontario
*Brown, Ruth I.	Edmonton, Alberta
Browne, D. Elizabeth T.	Meaford, Ontario
Bruce, L. D.	Kingston, Ontario
Buddell, Ronald	Kitchener, Ontario
Burgess, G. E.	Southampton, Ontario
*Butler, M. J.	Richmond, Quebec
Carswell, E. W.	Trenton, Ontario
*Charron, C. G.	Timmins, Ontario
*Chance, J. G.	Ottawa, Ontario
*Cheney, D. H.	Ottawa, Ontario
Chodos, Theodore	Outremont, Quebec
*Clancy, J. P. I.	Semans, Saskatchewan
Clark, Barbara U.	Kingston, Ontario
Coll, Norma A.	Ottawa, Ontario
Cook, H. L.	McAdam, New Brunswick
Cooper, J. R.	Ottawa, Ontario

Cosh, Joscelyn V. B.	Ottawa, Ontario
Coyles, M. Joycelyn	Ottawa, Ontario
Cramer, Fern J.	Kingston, Ontario
Cream, Margaret R.	Quebec City, Quebec
Creighton, Helen A.	Napanee, Ontario
*Cross, Edward	Kingston, Ontario
*Cross, S. Elinor	Brockville, Ontario
Daly, Elizabeth A.	Kingston, Ontario
Davidson, A. T.	Fort William, Ontario
Davidson, Edgar	Montreal, Quebec
Davidson, Eleanor W.	Belleville, Ontario
Davies, Olwen C.	Morrisburg, Ontario
Delahey, Margaret G.	Toronto, Ontario
Dewar, D. G.	Fort William, Ontario
*Dickson, S. N.	Sarnia, Ontario
Donnelly, A. H., B.Com.	Simcoe, Ontario
Doyle, J. G.	Napanee, Ontario
Dunn, Mary F.	Renfrew, Ontario
Dunwoody, D. M.	Oakville, Ontario
Dyson, Nancy G.	Carp, Ontario
Edwards, Mary Alice	Ridgetown, Ontario
*Elliott, F. G.	Prescott, Ontario
Elliott, Gwendolyn J. C.	Toronto, Ontario
*Escott, Barbara L.	Niagara Falls, Ontario
Fenton, G. B. C.	Jarnac, Quebec
*Fergusson, F. N.	Toronto, Ontario
Findlay, Elisabeth M.	Toronto, Ontario
Fitzgerald, M. Adele	Peterborough, Ontario
Fleming, Eleanor I.	Owen Sound, Ontario
Flynn, R. J.	Kingston, Ontario
*Forrester, J. E.	Kingston, Ontario
Foster, Ann E.	Toronto, Ontario
*Frattura, J. R.	Timmins, Ontario
Freeman, Dorothy	Simcoe, Ontario
Furbert, Eloise L.	Crawl, Bermuda
*Garber, Ralph	Outremont, Quebec
Garvie, Roger	Kilsyth, Ontario
Geddes, Alison F.	Pictou, Ontario
Gehan, D. Joan	Fort William, Ontario
Gerard, Margaret A.	Ottawa, Ontario
*Gillion, M. M.	Bobcaygeon, Ontario
Glenn, W. B.	Ottawa, Ontario
Gloin, G. A.	St. Thomas, Ontario
Godwin, W. C.	Colborne, Ontario
*Gogins, Florence (Sister Saint Elizabeth of the Cross)	Ottawa, Ontario
Gooderham, Elizabeth A.	Calgary, Alberta
Goyette, P. R.	Ottawa, Ontario
Green, Barbara M. E., B.Com.	Ottawa, Ontario
*Green, W. R.	Ottawa, Ontario
Hamilton, Ruth B.	Kitchener, Ontario
*Harris, Martha J.	Maryfield, Saskatchewan
Harrison, Claire E.	Montreal, Quebec
Harrison, D. E.	New York, New York
Hebden, K. Joan	Fort William, Ontario
Hecht, Esther	Renfrew, Ontario
*Henderson, A. M.	Wingham, Ontario

Hickey, Michael	Kingston, Ontario
Hodder, B. L.	Elginburg, Ontario
*Holloway, A. E.	Verdun, Quebec
Holloway, Grace B.	North Bay, Ontario
Honsberger, Lola N.	Simcoe, Ontario
*Jackson, Marcella H.	Kingston, Ontario
Janes, Ann E.	Toronto, Ontario
Johns, Mary C.	Ottawa, Ontario
Johnson, D. Shirley	Winnipeg, Manitoba
Johnston, J. R.	Ottawa, Ontario
Jones, Betty E.	Morrisburg, Ontario
Jordan, H. W.	Outremont, Quebec
*Katz, S. S.	Cornwall, Ontario
Kaumeyer, Lois E.	Chippewa, Ontario
*Kearney, Margaret J.	Moose Jaw,
	Saskatchewan
Kennedy, Elizabeth H.	Dunrobin, Ontario
*Kettles, Mary I.	Ramsayville, Ontario
Kinlin, B. J.	Oshawa, Ontario
Klions, H. L.	Montreal, Quebec
Koen, V. J.	Kingston, Ontario
*Kugler, A. E.	Leader, Saskatchewan
*Lafontaine, Kathryn A.	Schumacher, Ontario
Lamothe, Muriel L.	Ottawa, Ontario
*LaPenna, Frances	Westmount, Quebec
*Latimer, J. W.	Ottawa, Ontario
*Loan, W. W.	Ottawa, Ontario
Lodge, Dorothy G.	Kingston, Ontario
*Loucks, G. C.	Flesherton, Ontario
Mackey, G. D.	Ottawa, Ontario
Madison, J. A.	Fort Frances, Ontario
*Maitland, Beulah E.	Pakenham, Ontario
Martin, J. A.	North Bay, Ontario
Martin, J. D. P.	Picton, Ontario
*Martin, P. B.	Kingston, Ontario
Martin, R. J.	Palmerston, Ontario
Maxwell, D. S.	Ottawa, Ontario
*Mealey, Barbara J.	White River, Ontario
*Meyers, Ila I.	Trenton, Ontario
Michael, Barbara A.	Ottawa, Ontario
Miller, W. E.	Picton, Ontario
Mitchell, Joan B.	Vancouver,
	British Columbia
*Moffat, Lawrence	Newburgh, Ontario
Mohr, Elizabeth P.	Ottawa, Ontario
Moon, J. C.	Parry Sound, Ontario
Morden, W. L.	Picton, Ontario
Morgan, Agnes J. B.	Kingston, Ontario
*Morrison, D. A.	Toronto, Ontario
Morrison, Elizabeth M. R.	LaTuque, Quebec
*Myles, Doris K.	Ottawa, Ontario
McAdoo, Margaret E.	Calgary, Alberta
McCaffrey, Doreen M.	Stittsville, Ontario
MacDermid, H. D.	Martintown, Ontario
McDivitt, C. Kerby	Petrolia, Ontario
*MacDonald, F. C.	Port Arthur, Ontario
*McDowall, R. J.	Ottawa, Ontario

McDowell, W. E.	Shawville, Quebec
*McGinnis, Helen R.	Agness, Oregon
*MacInnis, Mary Catherine (Sister Saint Joseph Miriam)	Sydney, Nova Scotia
McKee, Bernice I.	Montreal, Quebec
*McKenzie, G. M.	Cobourg, Ontario
MacLennan, Mary M.	Maxville, Ontario
MacMartin, G. M.	Gananoque, Ontario
McMaster, B. F.	Brighton, Ontario
McMichael, R. G.	Kingston, Ontario
*McNeil, J. H.	Kirkland Lake, Ontario
*McRoberts, S. H.	Islington, Ontario
Newman, A. June C.	Kingston, Ontario
Nichols, J. G.	Peterborough, Ontario
*Nixon, J. D.	Sault Ste. Marie, Ontario
Noonan, D. E.	Hamilton, Ontario
O'Riordan, Maureen S.	Kingston, Ontario
Orr, Sheila M.	Toronto, Ontario
Palef, Lawrence	Ottawa, Ontario
Paul, Lois K.	Napanee, Ontario
Pearen, H. R.	Kingston, Ontario
Peeling, W. H.	Bruce Mines, Ontario
Percival, A. F.	Quebec City, Quebec
*Perrin, G. E.	Ottawa, Ontario
Pindred, D. Maud	Billings Bridge, Ontario
*Pitcairn, A. M.	Montreal, Quebec
Poulin, L. F.	Toronto, Ontario
Pranschke, Doreen M.	Ottawa, Ontario
*Rankin, W. M.	Madoc, Ontario
Rath, Ada M.	St. George, Ontario
Reid, R. J.	Collins Bay, Ontario
Rendell, Betty E.	Deseronto, Ontario
Robertson, J. H.	Plattsville, Ontario
Robertson, R. O.	Selkirk, Manitoba
*Robinson, W. H.	Ottawa, Ontario
Ross, Marjorie L.	Cobden, Ontario
Roth, M. H.	London, England
Rouff, K. A.	Trinidad,
	British West Indies
Rudie, Ray	Montreal, Quebec
Rutherford, D. J.	Leaside, Ontario
Savery, L. T.	Oshawa, Ontario
Sally, Margaret L.	Kingston, Ontario
Scarth, Jean C.	Cornwall, Ontario
Schaus, Helen D.	Waterloo, Ontario
Schofield, Patricia A.	Aylmer East, Quebec
*Scott, J. W.	Halifax, Nova Scotia
Scott, R. J. M.	Lindsay, Ontario
*Shaver, D. W.	Avonmore, Ontario
*Shearman, G. E. W.	St. Eustache, Quebec
Sheffield, Shirley I.	Lyndhurst, Ontario
Shiell, Muriel F.	Kitchener, Ontario
*Short, J. W.	Arnprior, Ontario
Shorten, R. K.	Foxboro, Ontario
Shuren, Mary	Kapuskasing, Ontario
Smith, Cynthia M.	Kingston, Ontario
*Smith, D. S.	Toronto, Ontario

*Smith, H. C.	Copper Cliff, Ontario
Smith, Pamela K.	Winnipeg, Manitoba
*Smythe, E. B.	Kingston, Ontario
Stacey, Joyce W.	Montreal, Quebec
*Steele, J. M.	Fort Frances, Ontario
Steeves, Frances E.	Macdonald College, Quebec
Steinberg, Maurice	Montreal, Quebec
*Strickland, Antony	Toronto, Ontario
Stuart, E. June	Hamilton, Ontario
*Stutt, H. A.	Montreal, Quebec
Switzer, R. G.	Edwards, Ontario
Tani, J. C.	Montreal, Quebec
Terziano, Mary T.	Huntsville, Ontario
Thompson, Elizabeth S.	Ottawa, Ontario
Toole, D. E.	Kenora, Ontario
Towill, W. W.	Trenton, Ontario
Trill, C. W.	Wolfe Island, Ontario
Trimble, Gladys M.	Ashton, Ontario
Truckenbrodt, Janet I.	Crystal Beach, Ontario
*Uyeda, Mariko	Verdun, Quebec
Vallentyne, Ann V.	Kingston, Ontario
Vallotton, M. Phyllis	Montreal, Quebec
Vogan, G. L.	Mitchell, Ontario
*Walters, M. Grace	Chatham, Ontario
Weiser, Gerald	Quebec City, Quebec
*Weldon, K. O.	Sault Ste. Marie, Ontario
Whitney, Eleanor F.	Leamington, Ontario
Whyte, Edith M.	Ottawa, Ontario
*Wilson, Dorothy M.	Toronto, Ontario
Wilson, R. H.	Ottawa, Ontario
*Wisbord, Nathan	Montreal, Quebec
Woods, L. A.	Kingston, Ontario
Woods, Mary E.	Kenmore, Ontario
*Wright, Barbara E.	Kingston, Ontario
Wright, Helen I.	Windsor, Ontario
Wright, Joan W.	Kingston, Ontario
Wright, Marian M.	Kingston, Ontario
Zeran, Otha I.	Northfield, Ontario
*Ziola, Rudolf	Ottawa, Ontario

Degree of B.Com.

Anderson, A. T. E.	Ottawa, Ontario
Arbuckle, R. W.	Ottawa, Ontario
Armstrong, Helen	Kingston, Ontario
Barclay, L. E.	Athens, Ontario
Barton, R. D.	Beachville, Ontario
Benson, R. O.	Peterborough, Ontario
Black, J. B.	Kingston, Ontario
Bronskill, E. E.	Pictou, Ontario
Carson, M. P.	Ottawa, Ontario
Coulter, E. M.	Stratford, Ontario
Covey, S. J.	Kingston, Ontario
Crause, S. J.	Stirling, Ontario
Cross, H. J.	Kingston, Ontario

Curry, A. M. M.	Halifax, Nova Scotia
Davies, A. K.	Three Hills, Alberta
DeRé, G. D.	Fort William, Ontario
Dick, J. A.	Ottawa, Ontario
Dickson, D. R.	Kingston, Ontario
Dinwoodie, J. I. D.	Rosetown, Saskatchewan
Duggan, S. S.	Toronto, Ontario
Fitch, C. J.	Moncton, New Brunswick
Fletcher, J. K.	Toronto, Ontario
Flynn, J. A.	Beamsville, Ontario
Giles, R. L.	Moose Jaw, Saskatchewan
*Haysom, Veronica M. T.	Regina, Saskatchewan
Hedley, J. D.	Moose Jaw, Saskatchewan
Helperin, Maurice	Timmins, Ontario
Hird, J. G.	Fort Erie North, Ontario
Honsberger, Lola N.	Simcoe, Ontario
Hope, R. J.	Peterborough, Ontario
Iler, W. B.	Toronto, Ontario
Johnson, A. A.	Kingston, Ontario
Julian, Glenna H.	Fenwick, Ontario
Kinlin, L. R.	Oshawa, Ontario
Laird, S. B.	Ottawa, Ontario
Lambert, J. F.	Ottawa, Ontario
Lesslie, J. B.	Kingston, Ontario
Lloyd, L. O.	Newboro, Ontario
Lorimer, R. A. J.	Regina, Saskatchewan
Martin, R. W.	Sudbury, Ontario
Masterson, E. L.	Toronto, Ontario
Milliken, D. F.	Regina, Saskatchewan
Minnes, G. P.	Kingston, Ontario
Moncur, W. D.	Almonte, Ontario
Moore, G. A.	Rouleau, Saskatchewan
Morris, N. C.	Kingston, Ontario
McCracken, E. W.	Kingston, Ontario
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MacKay, D. E.	Fenelon Falls, Ontario
McKenna, W. A.	Saint John, New Brunswick
MacKillican, J. A.	Moose Creek, Ontario
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O'Grady, A. J.	Kingston, Ontario
Osborn, D. C.	Edmonton, Alberta
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Presma, A. M.	Regina, Saskatchewan
Pringle, H. D.	Hamilton, Ontario
Purkis, J. H.	Kingston, Ontario
Reid, W. E.	Kingston, Ontario
Robertson, G. M.	Kingston, Ontario
Ross, J. C.	Rossland, British Columbia
Ryan, C. J.	Ottawa, Ontario
Sellers, H. A.	Winnipeg, Manitoba
Sinclair, R. M.	Kingston, Ontario
Slorance, Margaret I.	Edmonton, Alberta

Small, W. D.	Picton, Ontario
Stone, J. H.	Edmonton, Alberta
Sutherland, J. A.	Almonte, Ontario
Sutton, G. D.	Chatham, Ontario
Tremblay, J. L.	Quebec City, Quebec
*Turner, A. C.	Wiseton, Saskatchewan
Viets, R. D.	Ottawa, Ontario
Viner, Joseph	Ottawa, Ontario
Walker, W. T. C.	Sydenham, Ontario
Wanless, H. E.	Ottawa, Ontario

